Political, Economic, and Social Reform in Lithuania: Implications for the Environment

by

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in memory of

Julie

13/7/46 - 21/2/93

my mother, my friend, my support

who could not see this thesis completed.

Statement

This thesis contains no material which has has been accepted for a degree or diploma by the University or any other institution, except where acknowledged in the thesis, and to the best of my knowledge and belief, no material previously published or written by another person, except where due reference is made in the text of the thesis.

A. Banks

A. Banks.

Abstract

The thesis tests the hypothesis made elsewhere (Banks 1991, Kritkautsky 1995) that, on regaining independence, Lithuania had the capacity to create an environmentally sustainable society based on historical connections with the land and mass support for environmental issues during the fight for independence from the Soviet Union. It is found that the priority given to environmental issues on the Lithuanian political agenda has declined since the restoration of independence. Regardless of the political leanings of those in power, these goals have been replaced by immediate economic and political concerns, hindering any possibility for the creation of an environmentally progressive society.

The factors involved in the rise and fall of environmental issues and of the Green movement in Lithuania are discussed, together with the connection these have with secession from the USSR, and the pattern of economic and social development that has followed. It is found that, since the restoration of independence, environmental problems remain and initial hopes of integrating environmental and economic policy have failed. In looking at all the influences involved in resolving environmental problems, the future of environmental policy in Lithuania is assessed.

Two case studies are provided which highlight the interrelationship between economics, ecological problems, political priorities, national identity, and social conditions. Water pollution, particularly in the Baltic Sea and the Nemunas River, is an environmental priority in Lithuania but there are several obstacles to its improvement and it cannot be resolved without international cooperation. Energy production has been one of the most controversial issues in Lithuania, with debate initiated even before secession. The continued operation of the Soviet-designed nuclear power plant at Ignalina and the proposed construction of the environmentally destructive and economically inefficient oil terminal at Butinge demonstrate the relatively low priority given to environmental issues and the primacy of economic and political considerations in an atmosphere of strong national sentiment.

National identity and environmental concern had an influential role in the fight to restore independence and this is examined within the context of social movement theory. The theory of an increasing concern for

economic issues is tested by discussing the connections between the environment and economic systems (in theory and practice), the situation in the USSR, CEE, Lithuania, and the EU and the negative implications these have had for environmental policy in those countries.

An analysis of both internationally and domestically derived financing of environmental projects is also presented which highlights the nuclear and waste water treatment priority of programmes, identifies problems in using fiscal measures, and questions the values of international donors. The hypothesis is further tested by reviewing political developments, the process of rebuilding democracy, and the various legal reforms necessary for facilitating an open, sustainable society in which environmental issues are a priority. It is found that while some positive developments have occurred, such as legislative reform and some improvements in water quality, the primacy of economic development will continue at the expense of environmental protection.

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Abbreviations and Acronyms

BCSD - British Council of Sustainable Devlopment

BNS - Baltic News Service

BOD - Biological Oxygen Demand

CE - Council of Europe

CEE - Central and Eastern Europe

CIS - Commonwealth of Independent States

CPL - Communist Party of Lithuania

EBRD - European Bank of Reconstruction and Development

EC - European Community

ECU - European Currency Unit

EEA -European Economic Area (EU+EFTA signatories)

EEA - European Environment Agency

EFTA - European Free Trade Agreement

EIA - Environmental Impact Assessment

EIB - European Investment Bank

EPA - Environmental Protection Agency

ESF - Environmental Support Fund (for Central and Eastern Europe) - Danish

EU - European Union (formerly EC prior to Maastricht Treaty)

FME - Free Market Environmentalist

FOEI - Friends of the Earth International

FSU - Former Soviet Union

FYR - Former Yugoslav Republic

GATT - General Agreement on Tariffs and Trade

GDP - Gross Domestic Product

HAS - Hydro-accumulation Station

HELCOM - Helsinki Commission

IAEA - International Atomic Energy Agency

IBRD - International Bank of Reconstruction and Development

IEA - International Energy Agency

IFI - International Financial Institution

IUCN - International Union for the Conservation of Nature

LDDP - Lietuvos Demokratine Darbo Partija / Democratic Labour Party of Lithuania

LEI - Lithuanian Energy Institute

LEP - Law on Environmental Protection of the Republic of Lithuania

LFL - Lithuanian Freedom League

LGF - Lietuvos Gamtos Fondas / Lithuanian Fund for Nature

LGM - Lithuanian Green Movement
LOS - Law of the Sea Act 1982
MAP - Maximum Allowable Pollution
MEP - Ministry of Environmental Protection (Lithuania)
MFA - Ministry of Foreign Affairs (Lithuania)
NES - National Environment Strategy (Lithuania)
NGO - Non-Governmental Organisation
NIC - Newly Industrialised Country
NPF - State Nature Protection Fund
NPP - Nuclear Power Plant
OECD - Organisation for Economic Cooperation and Development
OMRI - Open Media Research Institute
PHARE - Pologne, Hongrie: aide á la restructuration économique
PIP - Public Investment Programme
PPP - Polluter Pays Principle
RBMK - Reaktory Bolshoi Moshchnosti Kalalynye (High Powered Channalised Reactor)
REC - Regional Environment Center for Central and Eastern Europe
TAP - Temporary Allowable Pollution
UN - United Nations
UNCED - United Nations Conference on Environment and Development
USD - United States Dollar
USSR - United Soviet Socialist Republics
WANO - World Association of Nuclear Operators
WWF - World Wide Fund for Nature

Figure 1.1 The Baltic Region

Chapter 1: Introduction

1.1 Background

Lithuania is one of several republics formerly occupied by the Soviet Union that are currently undergoing dramatic change in all areas of society as they re-establish themselves as independent nations. The revolt against communism throughout the region was unique in itself and the process of change that has followed has had no working precedence. In many ways the

> events didn't resemble earlier twentieth-century revolutions, and not only because they were made against socialism rather than in the name of it. They were not led by organised revolutionary parties, were mostly peaceful, and state power, as it were, melted away rather than having to be directly overthrown (Giddens 1994:110).

Reform in just one area of society would be difficult for any country. Even more challenging for Lithuania, and others in the former communist bloc, is that reform is simultaneously being undertaken in all spheres of society. The uncharted nature of the transition from communism to capitalism has complicated the process which has been further compounded by economic problems and by the rebuilding of society on top of, rather than in place of, the old (Mason 1992:69). Lithuania, therefore, acts as an interesting case study for the examination of changes in the environment and environmental policy, and their relationship with the economic and political changes that have taken place since the restoration of independence in 1990/91. Such relationships are more difficult to identify under a more stable system. The process of change is extremely complicated, involving many obstacles, in the face of which many Lithuanians will struggle to remain motivated. Referring to the transition in the region, it has been noted that:

> [c]leaning up Eastern Europe will be a long, costly and often dispiriting process, disrupting the lives of millions. It will require cooperation with neighbours and involve an overthrow of the values of the immediate past...But,...it will also involve questioning the values of the Western donors whose money will be critical to the success of the clean-up (Cave 1990:7) (see Chapter 6).

In examining the environmental problems of Lithuania, this thesis is concerned with the processes of social, economic, and political reform that have influenced both environmental impact and policy development. In doing so, it demonstrates the complex relationship between various facets of

society and how these affect the environment in Lithuania.

As Lithuania has begun to transform society one cannot help wonder what Lithuanian society would have been like had annexation to the USSR never occurred. Many refer to the successful agricultural sector, which provided a sound economic base for the country in the inter-war period, as evidence of Lithuania's potential for economic leadership in the region. It is, of course, difficult to imagine what events would have occurred in the country and what situation it would be in if circumstances were different. Certainly they would have had a stronger economic base and they may have been a member of the European Union. On the other hand, the Lithuanian people may have felt more protective of their sovereignty, economic system, and resources and, therefore, been more inclined to oppose membership as the Scandinavian countries have done in recent years.

There would not be a RBMK[1] nuclear reactor (see Chapter 2) but there may have been another type of reactor creating similar concerns. There would not be the pollution problems stemming from Soviet military sites or from over-sized antiquated factories. But there would have been other factories producing for the European market with their own serious impacts on the environment. One can wonder whether the Lithuanian forests and lakes of today would still exist in their present quantities or whether the pressures of economic development would have led to more land clearance and construction in a small country (see 1.4). There are endless possibilities in hypothesising about what may have been.

It is not the intention of this thesis to claim either possibility, but it is worth pointing out that there are serious environmental problems in Lithuania resulting not only from the policies of the Soviet Union, but from economic development in general which would have occurred to some extent under a sovereign government. There would still be environmental problems to discuss in Lithuania had they continued to develop independently after World War II and some of these problems may have been worse than those that Lithuania currently faces. Yet, Lithuania was forceably incorporated into the Soviet Union and this has had impacts on all sectors of society and it forms the context in which present problems are discussed.

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1. Reaktory Bolshoi Moshchnosti Kalalynye (High Powered Channalised Reactor)

1.2 Aims and Objectives

The primary aim of this thesis is to test the hypothesis made elsewhere (Banks 1991, Kritkausky 1995) that, following the restoration of independence in 1990/91, Lithuania would take a lead in developing an environmentally progressive society. Lithuania was seen as being in an opportune position to do so, even though contemporary environmental awareness had evolved over a much shorter period of time than in the West. Lithuania's pagan ancestry of venerating nature and its subsequent historical connection with the land strengthened the possibility of Lithuania creating an environmentally sustainable society; together with the fact that environmental issues had already played an influential role in the restoration of independence. Further, reforms were necessary in all spheres of society, thereby facilitating and mitigating the effects of any associated upheaval.

An examination of the background to this hypothesis is made, including early Lithuanian perceptions of nature; the way in which these perceptions led to a respect for the land; and the development of cultural and national identity in general. Further, this thesis analyses the role environmental issues played during Lithuania's secession from the USSR, issues which were believed to be linked to early pagan perceptions of the environment and Lithuania's strong national identity.

To ascertain whether there are prospects for the creation of an environmentally sustainable society in Lithuania, it is necessary to assess the amount of *commitment* the Government, and the people, expend towards these ends. This thesis, therefore, presents an analysis of economic systems and their impact on the environment in theory and practice. The impacts of both the Soviet system and the free market system of the European Union are used to gauge past and future impacts in Lithuania. It also includes an evaluation of community action on environmental issues during the secession and in the years following the restoration of independence, as well as the avenues being created to facilitate public participation.

The commitment of Lithuania to environmental issues is evaluated by ascertaining government priorities and the financial support of the state for environmental rehabilitation and protection programmes. The role played by international assistance in environmental rehabilitation and protection, including the motives and priorities of donors, is also discussed.

Environmental decisions are made within the political climate of a particular country. Therefore, a discussion of the political situation in Lithuania and the priorities of the major parties is presented in order to establish political will. Democratic processes are a crucial aspect of an environmentally sustainable society, particularly the establishment of avenues for public participation in the decision-making process. Rebuilding democracy has been a major part of the reform process in Lithuania, so an analysis of its development and any problems faced is important in establishing the prospects for environmental sustainability in Lithuania. Another indication of commitment is the development of legal measures which protect environmental integrity and which provide mechanisms for participation, responsibility, and accountability. An overview of the relevant environmental legislation is also provided in this thesis, with the aim of ascertaining commitment to environmental rehabilitation and protection in Lithuania.

In testing the hypothesis, the thesis demonstrates the complex situation in which post-communist countries have been placed. The increasingly obvious problems of pollution, high inflation, lack of services, energy short falls, poor technology, and crime are not easily resolved simultaneously. While looking in particular at the environmental issues in Lithuania, it becomes clear that so many issues are inseparable. The thesis highlights some of the factors involved in the rise and fall of environmental concern and the Green movement and the connection these have with both secession from the USSR and the pattern of economic and social development that followed. In doing so, the thesis aims to ascertain why environmental problems remain and why hopes of integrating environmental and economic policy (thereby creating an environmentally sustainable society) appear to have failed. By looking at all the influences involved in attempts to resolve environmental problems, the future of environmental policy in Lithuania is assessed.

It is found that the aforementioned hypothesis has not proved correct. There are a number of reasons for this; primarily, economic adversity (which, in turn, leads to the pursuit of economic rationalist goals), strong national sentiment, an undeveloped political culture, and ineffective administrative structures. All of these have become a hindrance to the priority given to environmental issues, as is evident in the countries of Central and Eastern Europe (CEE). Even if desires for environmental protection are given some measure of importance by future governments, there will still be barriers to

successful implementation of such policies. It is argued that it is only possible to avoid such a pessimistic prognosis if it is recognised that economic recovery is dependent on a healthy environment, ultimately requiring adequate environmental planning to mitigate against the effects of increased production. This can only be achieved by enacting environmentally sound policies with a long-term focus, followed up by effective implementation, and, ultimately, *commitment* to the notion of environmental protection in general.

1.3 **Method**

The thesis is written from an environmental perspective and, to that end, has the protection of the natural environment (which includes the health and well being of the human inhabitants) as its highest priority. A thesis with a different focus might have different conclusions but that is not to say that this thesis ignores other perspectives. Social, political, and economic issues are also considered from within the environmental perspective. A central tenent of Green political theory is the understanding that political, economic, and social problems are fundamentally caused by our intellectual relationship with the non-human world and the practices which stem from it. Thus, research which appreciates the interdependence of the human and non-human worlds, and the parts within them, is preferable to a reductionist approach in which things are studied in isolation (Dobson 1990:37). This multidisciplinary approach provides a clearer picture of the way in which environmental problems are interrelated with social (including religious), economic, and political problems and the degree of influence each has on daily life and future directions. The majority of articles about Lithuania are written from an economic perspective on the problems of reform. This narrow focus demonstrates how interrelationships can be ignored or lost (see Chapter 5).

The thesis was prepared primarily in Tasmania, Australia between February 1992 and March 1997 but involved three research trips to Lithuania, one of 6 months in 1992, one of 10 weeks in 1994 (which coincided with two international conferences that I attended, where further comments, contacts, and information were collected making the second trip 4 months in duration), and a third of ten weeks in 1996 (which coincided with an invitation to present a paper at an international workshop in Vilnius). During these research trips, information was gathered by way of interviews with politicians,

ministry employees, consultants, green activists, academics, scientists, and students and through requests of such people to provide documents, articles, or reports. A small survey of 96 university students and 37 green activists was conducted in 1992 to gain an understanding of the level of environmental awareness. The questionnaire was administered to students at Vytautas Magnus and Vilnius Universities at the beginning of various classes and at an "English Club" meeting. There were 16 questions, primarily multiple choice but including open-ended questions relating to perceived environmental problems. Students were also asked about voting preferences. A copy of the questionnaire appears in the appendix and some results are referred to in Chapters 2, 3, and 4. It was originally hoped that the survey would be more extensive and could be repeated at a later date but for various logistical reasons it was not and, therefore, remains largely anecdotal.

The time spent in Lithuania was invaluable in terms of understanding the social, economic, and environmental problems since a researcher cannot expect to grasp the specific tension between economics and the environment, for example, if they have never experienced life in that country. Such tensions are, of course, common to all societies, but the particular issues, problems, and priorities will differ in each country and are often contingent on specific cultural and political contexts.

The economic hardship at the individual and family level was made patently clear during the first visit in 1992. At that time, inflation was extremely high[2] while wages failed to increase comparably. In addition, due to conflicts with the Russian government regarding debts on each side, Lithuania was expected to pay world market prices for oil, effectively resulting in an "oil embargo". The consequences of this was that central heating was provided late and only at 13 degrees Celsius while hot water was unavailable except to hospitals and on occasional days, despite outside temperatures of minus 15°C.

The severity of the environmental problems, in particular in energy, waste water treatment, abandoned Soviet military sites, and poor technology-related air pollution, also highlight the difference between problems in Lithuania and Western countries such as Australia. This is especially so when the aforementioned economic and infrastructure problems are linked with the

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2. Inflation was 380% in 1991 and 1160% in 1992 (Samonis 1996:145).

impacts on the morale of society. Case studies are used to illustrate the unique situation in Lithuania, while many of the issues are indicative of all post-communist countries (see Chapters 2 and 3).

1.3.1 Limitations

It was difficult to obtain relevant material in English and, on occasions, some articles were translated with much appreciated assistance from Darius Sabaliunas, Kristin Baird, Aloyzas Knabikas, Jadvyga Druskiene, and Algirdas Makarevicius. The language barrier caused further problems in interviewing. On some occasions, interviews were carried out with the assistance of an interpreter - most often not trained in such a position. Despite developing conversational skills in Lithuanian, it was never certain that everything was being repeated or that the questions were understood by the interpreter. When the interviewee spoke English it was much easier, however there were still problems with catching exact meanings on both sides and misunderstandings were a common phenomenon. Perhaps the most common misunderstanding was in regards to the research approach. It was not only a language barrier that left people confused about what discipline was the focus for the research. The concept of multidisciplinary work fell largely on deaf ears, although the approach is being attempted at the new Department of Environmental Studies at Vytautas Magnus University in Kaunas and the Environmental Studies Centre at the University of Vilnius and welcomed by the Institute of Sociology, Philosophy, and Law in Vilnius.

There were also blatant attempts to withhold information even though it was available for public dissemination, the only apparent reason being disagreement with my general views and an unwillingness to assist foreign researchers "who know nothing about Lithuania" and "who want to make money out of the country". Such protective attitudes on providing information, which include attempts to maintain some sense of secrecy and authority over information, are reported to be a legacy of the "old school" of Soviet intelligentsia and certainly highlight the way in which information was controlled in the past as well as the lasting influence such approaches have made. There are also implications of such attitudes for the rebuilding of democracy (see 7.2.3).

It was difficult to maintain communication whilst back in Australia and the expected advantage of having developed contacts during the first trip was

minimal. To be fair, however, some successful correspondence provided invaluable material. Due to these problems, a second research trip became necessary in order to obtain missing data (much more of which was available in English), providing an opportunity to compare observations from the previous trip two years earlier. The third, unexpected trip to attend the *Production, Economy, and Environment: Theories and Applications* International Workshop, allowed further information collection and comparison.

1.3.2 Notes on Terminology and Abbreviations

Since 'environmentally sustainable society' in Lithuania is the focus of critical evaluation in this thesis, an interpretation of the term will now be provided. The foundation of Green thinking is the fact that the earth's natural resources are finite, putting limits on economic growth which utilises those finite resources. In addition, economic growth is exponential in character as are the associated environmental and social problems. The interaction between the various problems is such that solving one does not necessarily lead to the resolution of all the problems and may in fact exacerbate some. Further, the general trend toward technical solutions to environmental problems will not lead to sustainable society (Dobson 1990:77).

Environmentalists have put forward various models of society which are aimed at sustainability including; 'centralised authoritarianism', 'authoritarian communal system', a 'new global order', and 'anarchical society' (Dobson 1990:81-83). Dobson (1990) has argued that only the latter has all the main facets of the Green political ideology of a sustainable society, particularly, egalitarian and participatory principles. However, there are concerns that such a society in which 'government is the people' has little practical relevance, especially on a large scale. For the purposes of this thesis, the principles of equality and open, pluralistic, participatory democracy are taken as essential for environmentally sustainable society along with: a focus on small business and clean technology; costing of resources utilised; strict fiscal and legal measures to protect the environment and to facilitate public participation; financial support for nature protection for its own sake; support for environmental education, health, and welfare; and a preparedness to take no action in order to maintain environmental integrity - all of which are not possible without some degree of state intervention. The following chapters seek to ascertain whether Lithuania has been undertaking changes

in the environmental, economic, and legal sectors which would indicate a move toward such a society.

The term USSR (United Soviet Socialist Republics) is used when referring to policies, events, or decisions taken by that government. The term Former Soviet Union (FSU) is used when discussing issues relevant to the most or all of the republics that were once a part of the USSR. The Commonwealth of Independent States (CIS) refers only to those republics that became members of that coalition[3]. When discussion relates to countries of the former communist bloc in general they are referred to as such unless it specifically relates to those outside the FSU such as Poland, Czech Republic, Slovakia, Hungary, Bulgaria, and Romania at which time the term Central and Eastern Europe (CEE) is used. The European Community (EC) formally became the European Union (EU) at the signing of the Maastricht Treaty in 1993 and the latter is used when referring to the community, regardless of whether the issue relates to events prior to the Maastricht Treaty. When citing documents published by the organisation, the name on the published document is used (EC or EU).

1.4 **Lithuanian Overview**

1.4.1 Geography

Lithuania's borders encompass an area of 65 300 km^2, with forests covering around 30 per cent and agricultural land accounting for 60 per cent of the total area (Duzinskas and Gutkauskas 1994:79 and Lithuanian Department of Statistics 1996). It is situated in the middle of the European continent, bordering Latvia in the north, Poland in the south, Kaliningrad in the south west, Byelorussia to the East, and the Baltic Sea to the west (see Figure 1.1). Its area is twice the size of Belgium (30 315 km^2) but smaller than Ireland (70 283 km^2). The capital, Vilnius, was established in the 14th Century by the Grand Duke Gediminas.

The country is relatively flat and is endowed with a large network of lakes, rivers, and streams. At the beginning of the 11th Century, the Lithuanian landscape consisted of 56 per cent forest, 24 per cent wetlands, and 20 per

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[3] Armenia, Azerbaijan, Byelorussia, Georgia, Kyrgystan, Kazakhstan, Moldova, Russian Federation, Tajikistan, Turkmenistan, Ukraine, Uzbekistan.

cent cultivated land. This has changed signifcantly, with 28 per cent covered by forest, 8 per cent covered by wetlands, and 66 per cent agricultural (Kavaliauskas 1994:98). Protected areas make up 11.2 per cent of Lithuania's territory, including 4 Strict Reserves, 5 National Parks, and 30 Regional Parks (see Figure 1.2). There are also 290 State reserves and 62 Municipal reserves. These have varying levels of restriction as discussed in Chapter 7. There are ten provincial and 47 regional administrative districts (Duzinskas and Gutkauskas 1994:79 and Lithuanian Department of Statistics 1996b).

Figure 1.2 Lithuania's Protected Areas

1.4.2 Demography

Lithuania has a population of 3 709 100 (01.10.96) made up of approximately one third rural and two thirds urban residents. The population is ethnically homogenous, with 80 per cent Lithuanian, 9 per cent Russian, and 7 per cent Polish. The population peaked at 3.74 million in 1992 but, since that

time, the population has decreased by approximately 35 000 mainly due to re-emigration to other parts of the FSU but also due to a natural decrease. In 1994, the number of deaths exceeded the number of births by 3 654 people. The largest cause of death is diseases of the circulatory system (44.2 per cent), followed by injury and poisoning (including alcoholism) (21.7 per cent), and cancers (16.7 per cent). Since 1989, deaths caused by alcoholic intoxication increased by 4.1 times, murders by 2.4 times, and suicides by 69 per cent. These deaths have mainly been young men. Approximately 83 per cent of deceased young men (15-29 years) and about 50 per cent of older men died from accidents. This mortality rate amongst men has shortened the average life expectancy to 63.59 years while women in Lithuania can expect to live for 75.19 years (1995) (Lithuanian Department of Statistics 1996c, Lithuanian Department of Statistics *et al.* 1996).

Market reform, new businesses and structures, inflation, and low salaries, have affected the labour market in Lithuania. The unemployment rate had already reached 7.5 per cent in 1995 and has increased to 8.5 per cent at the start of 1997. Unemployment has added to social problems throughout the region as welfare payments remain low. The Lithuanian figure is relatively average with Estonia having 6 per cent unemployed and Latvia 7 per cent. The Czech Republic has managed to keep unemployment at 3 per cent while in Poland 12.5 per cent of the able population does not have employment (Lithuanian Department of Statistics 1996b, Lithuanian Department of Statistics *et al.* 1996 and *ELTA*, December 4 1996) (see also 5.4.3.1).

1.4.3 History

This thesis does not contain a comprehensive review or analysis of the history of Lithuania. It does contain discussion of the more recent events which led to the restoration of independence. That is not to say that history is unimportant. It is, in fact, a crucial element of the way in which Lithuanian society has developed and the nature of the existing environmental practices and associated problems. It also forms a backdrop for the way in which such problems are perceived and managed. The historical context is crucial to understanding present events in any country yet it is important to recognise its influence and significance without allowing it to achieve analytical dominance. It is, therefore, extremely important for this thesis yet the limitations of space require its detailing to be left to the historians. Excellent

Table 1.1 Significant Historical Events in Lithuania

Date	Event
1251	Mindaugas converts to Christianity
1253	Mindaugas crowned King of Lithuania by Pope Innocent IV
1263	King Mindaugas and his sons assassinated. Lithuania reverts to paganism
1385	Lithuanian ruler, Jogaila, marries Polish Queen, Jadwyga, starting Jagellian dynasty which continued in Lithuania-Poland until 1572
1387 Feb 1	Bishopric of Vilnius established
1410	Battle of Tannenberg. Teutonic knights are overwhelmingly defeated by Lithuanians and Poles
1558	Ivan the Terrible invades Baltic provinces
1569	Union of Lublin with Poland. Lithuania-Poland countered Tsar Ivan the Terrible in a 24 year war
1795	Polish-Lithuanian Commonwealth petitioned - most of Lithuania (except Klaipeda region) is taken over by Russia
1795-1915	Occupation of Lithuania by Tsarist Russia
1830 1863	Polish-Lithuanian revolts against Russian rule
1915-1918	German occupation of Lithuania
1917 Jan	Woodrow Wilson's speech on self determination
	Lithuania renews resolution for independence
	Lenin acknowledges the right to self-determination
1918 Feb 16	Lithuania declares independence. Initially governed by a presidential triumvirate
1918 Nov 11	WWI ends. First government of independent Lithuania is officially formed
1919-1921	Lithuanians, Poles, and Bolsheviks struggle for the Vilnius region. Poland claims Vilnius. Lithuania is governed from Kaunas
1919 April 4	Smetona becomes first president of Lithuania
1920	Establishment of parliamentary government
	Lithuania signs Treaty of non-aggression with Russia
1921 Sept	Lithuania accepted at League of Nations
1922 July	US recognition of Lithuanian State. Democratic constitution introduced
1923	Lithuania seizes Klaipeda from Germany
1926	National Party takes over parliament by military force. Smetona resumes power
1934	Co-operation Treaty between Estonia, Latvia, and Lithuania
1939 Aug 23	Signing of Molotov-Ribbentrop Pact, dividing Poland and the Baltic States between Germany and the USSR. Lithuania is seen as a German "sphere of influence"
Sept 1	Germany invades Poland. WWII begins
Sept 17	USSR invades Poland
Sept 18	USSR occupies Vilnius
Oct 10	Vilnius returned to Lithuania on signing mutual assistance pact with USSR. Soviet troops stationed in Lithuania
1940 June 15	Red Army occupies Lithuania. Smetona flees Lithuania
June 17	Formation of People's Government in Lithuania as a result of puppet elections
July 21	Lithuania "applies" for admission to the USSR
Aug 3	Lithuania annexed, major confiscation of property
Oct 9	Formation of Lithuanian Activist Front
1941 Jan 10	Protocol of Molotov-Ribbentrop pact transfers Lithuania to Soviet influence in exchange for 7.5 million gold dollars
June 14-22	Deportations of over 30 000 Lithuanians to Siberia
June 22	Germany invades USSR. Around 100 000 Lithuanians stage a revolt against Soviets
June 23	Formation of provisional government and declaration of independence (never recognised by Germany)
Aug 5	Provisional government declares itself involuntarily suspended and disbands
1941-1944	About 170 000 Lithuanians and 200 000 Jews murdered by Nazis
1943 Jan-Feb	Germany defeated at Stalingrad
June 6	Allied landings in Normandy
July	Red Army re-enters Lithuania. Approximately 60 000 refugees eventually reach Western Europe

Table 1.1 continued

Date	Event
1944-1952	Guerilla warfare in Lithuanian forests. Tens of thousands killed on both sides
1945 Jan 28	Soviet re-occupation completed with the fall of Klaipeda sea port
1945-1949	Mass deportations. 250 000 Lithuanians deported
1946 June 10	United Democratic Resistance Movement formed
Feb 18	First post-war collective farm established
1951	Collectivisation of agriculture effectively completed
1952/3	End of unified guerilla resistance
1953	Death of Stalin. Recovery of culture and literature
1973	First edition of the Catholic dissident newsletter, *The Chronicle of the Catholic Church of Lithuania* is published, detailing Soviet repression in Lithuania
1982	Death of Breshnev. Andropov begins attempts at reform from above
1985	Appointment of Mikhail Gorbachev as Secretary General of Soviet Communist Party. Introduction of *glasnost* and *perestroika*
1986 April	Explosion at Chernobyl nuclear power plant, giving impetus to environmental protests. Lithuanian Writers Union issues statement condemning ecological problems
1988 June 3	Foundation of *Sajudis*
June 17	Founding of environmental group, *Atgaja*, indicating the beginning of a contemporary environment movement in Lithuania
Aug 23	Mass rallies to mark anniversary of the Molotov-Ribbentrop Pact. Turning-point for Lithuanian independence
Oct 15	Founding Congress of the Lithuanian Green Movement
Oct 22	Algirdas Brazauskas returns Vilnius Cathedral to the Church
1989 May 18	Declaration of sovereignty
May	Formation of the Lithuanian Green Party
Aug 23	'Baltic Way' - 2 million people form a chain of hands, from Vilnius to Tallinn, calling for independence
1990 Mar 11	Declaration of full independence. Vytautas Landsbergis elected Chairman
April 18	Moscow stops oil shipments to Lithuania
May 12	Baltic Co-operation Treaty of 1934 is renewed. Baltic Council established
June 23	Lithuania accepts, in principle, a moratorium on the declaration of independence. Soviet economic blockade temporarily ends
1991 Jan 11	Soviet paratroopers seize the press centre in Vilnius
Jan 13	Soviet troops seize television centre and tower in Vilnius - 13 people are shot or crushed by tanks
August 19-21	Failed coup d'état in Moscow
Sept 6	Soviet State Council recognises Lithuanian independence
1992 May 23	Landsbergis initiated referendum to create a Presidential system is unsuccessful
Sept/Oct	Russian oil embargo on Lithuania
Oct 25	Lithuanian Democratic Labour Party (LDDP), headed by Algirdas Brazauskas, win parliamentary elections. Referendum on presidential system is successful
1993 Feb 14	Brazauskas elected President of Lithuania
1994 June 13	Lithuania, Latvia, and Estonia form a Baltic Council of Ministers to present a united front on EU and NATO membership
July 18	Lithuania signs free trade agreement with EU
1995 July 15	"Mafia" boss, Boris Dekanidze is executed as Lithuania attempts to eliminate corruption
Nov 16	Offices of *Lietuvos Rytas* are bombed
Dec 11	Lithuania formally submits application to EU
Dec 15	US President Clinton re-affirms commitment to Baltic Republics
1996 Feb 8	Lithuanian Prime Minister, Slezevicius, dismissed from Parliament for abuse of powers
Oct 20	Homeland Union, headed by Landsbergis, wins national elections
Nov 13	New Lithuanian Government formed by Homeland Union and Christian democrats. Landsbergis becomes Chairman of Parliament and Vagnorius becomes Prime Minister

Sources: Lieven 1993, Srugoiene-Sruoga 1987, Suziedelis 1965 and Tuskenis 1986

1965, Silbajoris (ed.) 1983, Senn 1993, Hiden and Salmon 1994, and Rowell 1994. An overview of important dates in the history of Lithuania is provided in Table 1.1.

Nørgaard and Pedersen (1994) have argued that environmental policies in the Baltics are shaped by three analytically separate historical forces: their post-communist systemic legacy as shared with other post-communist countries; the Baltic identity created through a prism of collective memory of the western-style programmes pursued in the independence years of the interwar period; and autonomous historical events which have led to individual national identity. Where relevant, reference is made to specific events or general circumstances which have influenced either the environmental situation or the way in which it is managed. The thesis mostly contains discussion of more recent history (1940 to 1996), although earlier events are considered. Chapters 4, 5, and 7 refer most to historical events and their implications for the environment in present day Lithuania. As a starting point, some general historical points ought to be made.

Perhaps the most relevant aspect of Lithuanian history to this thesis is their record of resisting interference, with a view to protecting their territory and culture, from the many "outsiders" that have sought to control the small but geographically well-placed country. This tendency was influential in Lithuania becoming the last state in Europe to be Christianised in 1387. Resistance has essentially comprised two distinct forms; military struggle as used in the forests following the Soviet annexation, and cultural activities designed to maintain Lithuanian language and national identity in the face of 'Russification'. In terms of the latter, literature had 'an important capacity in supporting national identity' (Rubavicius 1994:45).

Lithuania is a nation state which emerged from the Grand Duchy of Lithuania following various Unions with Poland and many years of occupation by Tsarist Russia (see Table 1.1). They have had relatively few years as an independent nation, but have consistently fought for independence on the basis of their national identity. Independence between 1918-1940 was short-lived and, on June 15 1940, Lithuania was invaded by Soviet Russia (this period is discussed in more detail in Chapter 4). Drastic social and economic changes were carried out and a totalitarian military-based dictatorship was put in place, and annexation soon followed (Budreckis 1969:314). Resistance was essentially passive in 1940, using anti-Soviet literature to condemn the

occupation while the development of the Lithuanian Activist Front (LAF) led to more organised action (Budreckis 1969:316-19) (see also Chapter 4). Underground resistance swelled waiting for an opportunity to revolt.

It seemed the hour of deliverance was upon Lithuania when Germany attacked Kaunas on June 22 1941 and the Red Army began to withdraw. It was at this point that the LAF announced a provisional independent Lithuanian Government and violent clashes between Lithuanian rebels and the Red Army began until, on the night of June 23, the Red Army was driven out of Kaunas. The little-known provisional Government, which operated for 6 weeks, demonstrates that the revolt was organised and had a specific purpose: independence. During the six week period, the Government also resisted German authorities who did not recognise the Government. Eventually Germany created the administrative region of Ostland (Estonia, Latvia, Lithuania, and Byelorussia) on July 28, 1941. Resistance continued under German control, lasting until re-occupation by the Soviet Union in the summer of 1944 which saw the beginning of a partisan war that finally ended with the death of Stalin (Budreckis 1969:323-29 and 353).

The restoration of independence began with a declaration in 1990 while universal acknowledgment of this status culminated with the failed *coup d'état* against Gorbachev and the subsequent break up of the Soviet Union in August 1991 (see Chapter 4). Characterised by its peacefulness, the Lithuanian secession also involved violence, such as on January 13, 1991 when 13 people were killed as citizens protected media outlets and the parliament from oncoming Soviet tanks employed to quash aims of independence (see Valstybinis Leidybos Centras 1991 and Taskunas (ed.) 1992).

As this thesis shows, the tradition of resistance is also important in understanding the strong national sentiment in Lithuania which was crucial for cultural survival in the Soviet Union and ultimately for realising secession. National identity has also had implications for environmental policy. While the pagan perception of the environment set the scene for an environmentally aware society, a combination of other factors such as the more recent Catholic tradition, national sentiment fuelled by the history of control and resistance, and poor economic conditions in the years since the restoration of independence, have dominated the way in which environmental problems are perceived and managed. The pagan respect for nature and connection with the land has been seen as a basis for optimism

regarding the environmental situation in Lithuania (for example see Banks 1991). However, it must be viewed as a factor of Lithuania's cultural history which, while certainly influential in the evolution of national identity, is not an indication of present perceptions and policies. While there has been a revival of pagan philosophy and folklore, it has not had a strong influence in the modern Lithuanian way of life (see 4.2.1 and 4.3.2).

1.5 The Environmental Situation in Perspective

The Soviet Union's environmental protection policy was based on the assumption that collective ownership and central planning would solve environmental protection issues. Slogans such as "all for the good of man" and "we cannot wait for favors from nature; our task is to take from her", reinforced a modernist and anthropocentric worldview that the USSR's boundless riches were ripe for exploitation. A preoccupation with industrial development arose with a philosophy that big was better, huge was best, and science solved all the problems (Peterson 1993:11). Economic activity was centrally controlled so as to maintain relative interdependence among republics (see 2.2.1 and 5.4.1.1). There has been a tendency for authors to accuse the Soviet regime of ecocide, implying widespread environmental destruction. While this is true for many areas, there are huge differences between various parts of Central and Eastern Europe (Hansen 1995:20). There have also been significant acute and chronic pollution problems in the West. In the communist system, the emphasis was on production quotas rather than quality so little attention was paid to environmental or social controls, yet sites for industrial development tended to be aggregated in specific areas.

> This left a mixed legacy for the future. On the one hand, industrial pollution is severe in these industrial areas, but on the other hand, most industrial areas are fairly distinct, and environmental damage is less widespread than it has been in western Europe. There is, therefore, much that remains to be protected (Fisher for EBRD 1994:xi) (see also 1.5).

For example, it has been estimated that about two thirds of the natural environment in Lithuania has been severely damaged through sustained industrial, agricultural, and transport-related pollution yet the state of flora and fauna is, in comparison with Western Europe, relatively good. Some species are under threat with transboundary pollution from the CIS being a major contributor (Duzinskas and Gutkauskas 1994: 80&84). Air quality problems in general also do not appear to be very serious by western standards (Harrington 1993:5). As Chapter 3 demonstrates, water pollution is of greater

concern in Lithuania.

The environmental problems under examination and their relationship to social values, economics, and politics are by no means unique to Lithuania. Concern is growing world-wide regarding the effect of past policies on the environment and a re-evaluation of priorities has been taking place.

> [T]he interaction between continued economic development and the complex and often fragile systems on which development depends has become a major international political issue (Hurrell & Kingsbury 1992:2).

The international ascendancy of environmental issues, particularly during the 1980s, was a contributing factor in the political (and symbolic) significance of environmental degradation during the revolutions throughout Central and Eastern Europe (CEE) and the Former Soviet Union (FSU) (Fisher 1992:4-5). Concern from the international community gave some legitimacy to the work of activists in the region, particularly given the desire to re-enter that community. The world-wide interest in environmental issues and their resolution has led to the provision of environmental aid (see 6.2) and an increase in international agreements on the environment which need to be implemented at the national level. Lithuania, after rejoining the international community in 1991, has signed several of such agreements. The impact of these agreements (and indeed national environmental policies) is yet to be seen as implementation faces several obstacles including underdeveloped political, legal, and administrative structures, economic pressures, and a mistrust of scientific and technical expertise (Fisher 1992:6-9) (see Chapters 5, 6, and 7).

Due to the much advertised environmental destruction in the post-communist region, some confusion has arisen regarding the extent of the problems and the likelihood of recovery both within the nations and from outside. Duncan Fisher (1992) has usefully documented five categories of pollution problems specific to the CEE region which apply equally well to Lithuania and the other Baltic countries.

1. 'Pollution problems that could be resolved easily in the process of economic change': referring to such issues as emission levels that could be reduced through economic reform combined with stricter regulation, increased energy pricing, and industry modernisation;

2. 'Immediate problems that need specific solutions which are not hugely expensive': including saline pollution in rivers or reducing impacts of domestic heating provision;

3. 'Serious and expensive problems that are likely to get worse': including soil contamination affecting ground water supplies and river pollution where no treatment facilities exist;

4. 'Serious problems which are not getting worse, and can be tackled when economic conditions are more favourable': referring to some cases of soil and water pollution as well as some waste management sites. These problems can cause difficulties for western investors 'at a time when liability regulations are ill defined'; and

5. 'New problems that are emerging in the current process of economic development': These include the changing structure of energy supply (including nuclear energy); the dumping of unclean and outdated technologies by western industries; the changing composition of household waste (an increase in plastics, for example); and an increased impact on natural and cultural resources in the face of an expanding tourist and trade industry.

The two most debated issues, argues Fisher, are the likelihood of effective implementation of environmental legislation during the process of change (as expressed in point 1) given that the administrative structures are not often in a position to implement and enforce the well prepared policies and, secondly, the pattern of future development which focuses on the emerging problems (point 5) which are a consequence of the process itself but could, and ought to, be avoided (or at least minimised) by careful and thoughtful planning taking into consideration the historical, cultural, and political contexts. The early intentions of integrating environmental considerations into economic policy, creating a new system mindful of environmental protection which transcended the limitations of the models provided by East and West, have been thwarted by a combination of obstacles from the political, legal, and social spheres. Chapters 4, 5, and 6 analyse these factors and their connections in an attempt to understand why the environment has fallen from the political agenda in Lithuania, why it was there in the beginning, and why so many environmental problems remain in light of their significant role in the re-establishment of political independence.

Essentially, this thesis is about environmental politics and economics. It is about change and the way in which social organisations have interacted in the process of political and economic reform in Lithuania. As such, its focus is not environmental problems *per se*, however, a significant part of the thesis (Chapters 2 and 3) is dedicated to particular environmental problems in Lithuania which help to identify the interaction and connections between economics, politics, culture, and the environment by examining issues such as national sentiment, social movements, inflation, economic and environmental aid, the development of a democratic political culture, the restructuring of parliament and the legal system, and environmental sustainability. These are but two examples of a number of environmental issues needing resolution in Lithuania such as solid and/or hazardous waste disposal, air pollution, forestry, and species extinction.

The decision to develop a free market system in the countries of CEE and FSU has landed them with the description, 'countries in transition'. Manser (1993) argues that a more accurate description would be, 'middle-income developing'. He points out that the countries of CEE and FSU have not been 'in transit from being relatively poor to being relatively rich, industrialized, and western; to suggest otherwise was a hoax' and the term 'in transition' is merely a label for a 'group of countries which were and are likely to remain on the by-roads of the industrialized world' (Manser 1993:146). Part of the problem stems from the planting of ideal market models onto such countries without a full understanding of the cultural, historical, political, environmental, and economic context. While such poignant comments are relevant, the term 'in transition' will often be used in this thesis to describe those countries, like Lithuania, which have been in a process of political, economic, social, and environmental reform since the breakdown of the communist system. The Lithuanian governments have, themselves, used the term 'transition' to describe policy development. They have gone as far as setting December 31, 1999, as an end date for the 'transition' at which time they expect to be accepted as members of the European Union (Girnius 1995:58).

1.6 **Chapters in Review**

The issues of energy and water pollution are used as case studies to demonstrate the links between the processes discussed. The future of electricity generation and the oil industry are discussed as the most pressing

energy problems. The Baltic Sea and the Nemunas River are examined as examples of water pollution. They are presented in Chapters 2 and 3, so that the reader can become familiar with the particular problems in Lithuania before reading the discussion of the issues. It is intended that any further references to the examples will then be more clearly understood. The case studies have been chosen specifically for their representation of most or all of the issues being discussed. They had to be a major environmental concern for Lithuania, include the problem of balancing economic and ecological priorities, demonstrate the role of national sentiment, include reactions from the Green movement, or involve political decision-making. They also offer a fair representation of Fisher's five categories outlined above.

The energy crisis in Lithuania following independence brought the reality of economic transition to the people. With basic energy requirements lacking, solving the problem of energy supply is the greatest challenge for environmentalists. The economic versus environmental priorities is put to a great test. Solutions are inevitably political since most supplies previously came from Russia. Fisher has argued that the Western nuclear industry's plans for expansion in the region have influenced the way in which the energy debate (including proposed solutions to the crises in most post-communist countries) has developed. Attention has moved from demand-side to supply-side solutions. So, in effect, 'The "energy production or energy conservation?" debate is being turned into the traditional supply-side "what kind of energy production?" debate' (Fisher 1992:2).

In this thesis, the energy issue is broken into two examples. Firstly, an examination of the environment in Lithuania, and in particular energy, can not omit a discussion of the Ignalina Nuclear Power Plant (NNP). Nuclear power is of world-wide concern and the technology used at this plant has come under much criticism from the anti-nuclear movement and the international nuclear industry alike. Secondly, the debate surrounding the proposed oil terminal at Butinge on the coast of Lithuania is discussed. This was chosen for its controversial nature (the most discussed environmental issue in 1992-4), the role of various Green groups, and the conflict between economic, political, and environmental priorities in the face of national sentiment.

The Baltic Sea seems a natural place to begin a discussion on water pollution which is considered one of the most crucial problems in Lithuania. Following

from this, the problem of sewage treatment is discussed, particularly in Kaunas. The city has a population of around 500 000 people, has no sewage treatment facilities and is situated on the Nemunas river which flows into the Baltic Sea via the Kursiu Marios Lagoon (see Figure 1.2).

The interaction between religion (paganism and Catholicism), nationalism, and the environment is examined in Chapter 4. Lithuania was the last country in Europe to be Christianised and some elements of the pagan past are still found in the cultural practices of today. Particularly interesting is the connection ancient Lithuanians had with the land. Several fairytales and beliefs reinforce this connection. Today, the Lithuanian identity seems to be an incongruous mixture of strong Catholic morality and an identification with the pre-Christian ancestors who, though surrounded by enemies, were never vanquished (Sinnig 1992). The national identity is, nevertheless, very strong and was the focal point for secession from the Soviet Union. Therefore, the issue of nationalism will also be discussed, particularly in terms of the development and future role of two mass movements (the reform movement and the Green movement) which emerged at the height of political dissent in Lithuania facilitated in part by *glasnost* (openness) and *perestroika* (restructuring). Furthermore, the chapter will deal with the consequences of national sentiment and the aforementioned social movements on the environment.

An examination of Lithuania's environmental problems could not avoid the issue of economy. Indeed, any such study must include the universal problem of balancing economic and environmental needs. In Chapter 5, an overview of economic systems (in theory and practice) and their impact on the environment is used to demonstrate the relationship between economic and environmental priorities in past, present, and future systems employed in Lithuania. It will, therefore, analyse the tension between economic and environmental concerns which is particularly marked in a reforming economy. Again, such problems are not peculiar to Lithuania or even to the Central and Eastern Europe region. Unemployment, recession, pollution, and social inequity are now common throughout the world. It is particularly interesting in Lithuania given that economic change has been so dramatic and because the economy has become an engulfing concern for the population of independent Lithuania. It has become evident that the economic problems of transition have led to a downturn in production which has, in turn, led to a decrease in pollution. While some assume that an improvement in the

economy will allow more funds for environmental protection, it is first necessary to prevent the reverse of the aforementioned trend. Environmental policy must plan for the obvious increase in production that will accompany economic recovery in order to prevent a dramatic increase in pollution.

Chapter 6 has a practical focus, examining the methods of financing environmental rehabilitation and protection; an important aspect in ascertaining commitment to environmental rehabilitation and protection. Finance has been derived from international assistance as well as the complex domestic system of pollution permits and charges. The priorities of Government and international donors are evidenced by their direction of financing. Therefore,the priority given to environmental issues can be shown and, therefore, the likelihood of developing an environmentally sustainable society. The domestic generation of funds has come primarily by fiscal means and has been hindered by ineffective monitoring and policing mechanisms.

The future of all spheres of Lithuanian society is strongly influenced by the political situation of the country and the surrounding region. Political decisions in Lithuania often take precedence over economic decisions and it is, therefore, vital to include an analysis of political change and influence and, in particular, its significance for the environment - both in terms of policy and pollution.

Chapter 7 will deal with these political processes and examine the changes in political influence. During the preparation of the thesis, there were two changes of government. The Lithuanian Democratic Labour Party (LDDP) (formerly the Communist Party of Lithuania) was elected to government in November 1992 (second round) by a "landslide" victory over the *Sajudis* (Reform Movement) government which had been led by Vytautas Landsbergis. LDDP were not returned to office at the next national election held in October 1996 when the coalition of "post-*Sajudis*" conservative parties were elected to form government, led once again by Landsbergis. An examination of the priorities of these governments may give an insight into the future of the environment in Lithuania. Balancing these various priorities, whilst trying to retain power, involves continual trade-offs. In one country it might be considered political suicide to support nuclear power, for example, whilst in another such an allegiance might be beneficial. Governments must ascertain the power of certain interest groups such as

the Green movement, business, and foreign governments. The under-developed political culture in Lithuania is such that interest groups have not attained a high level of influence particularly since politicians do not seem to yet appreciate the bargaining power of votes.

Rebuilding democracy and the development of a new political culture which are important aspects of environmental sustainability are a focus of Chapter 7. Legal reform is also an essential part of facilitating democratic behaviour and in protecting the environment. An overview of environmental legislation, including a national environment strategy, that has been enacted in independent Lithuania demonstrates a well developed policy framework, however, there are several obstacles to effective implementation, and in particular to the integration of environmental concerns in economic policy.

A discussion of international cooperation is also discussed in Chapter 7, since it has been (and will continue to be) an important factor in the changes taking place. Lithuania has been accepted into the Council of Europe and a lot of effort is currently being directed into obtaining membership of the European Union. Many current and future decisions will be made with this in mind. The environmental impacts of this focus, and of later membership, are discussed and the environmental record of the European Union is examined. International environmental cooperation (research, joint ventures, education programmes, and international agreements) will be fundamental to improving the environmental situation in Lithuania. However, international pressure can also have negative implications and inclusion in the European Union may not resolve problems associated with the economy and the environment in Lithuania.

Chapter 8 presents some conclusions about the interrelationship of the aforementioned issues, problems, and processes and the way in which they have influenced environmental decision making. Given the enormous problems, some a legacy of fifty years of Soviet rule, some incurred by the process of separation, and others caused by the inexperience of the new leaders, environmental policy is likely to continue to suffer. Despite the initial importance given to environmental issues at the time of independence, this has lessened for a number of reasons. The protection system developed at the University of Vilnius which comprises areas with varying degrees of protection and accounts for around 11 per cent of the total territory, is a promising sign for environmental protection in Lithuania. As is the

development of a national strategy on environmental protection. However, there has been criticism that the National Parks network does not adequately represent biodiversity and the National Environment Strategy has also been criticised for having little practical relevance. Regardless of any other criticisms, effective implementation remains the key. Also, it is not adequate to protect particular areas if political and economic decisions on other issues continue to counteract any success. Thus, *commitment* is fundamental to effective implementation.

While Lithuania has begun to address environmental problems as part of overall reform in the country, expectations for an environmentally sustainable society in which environmental, economic, and social justice issues are integrated into all policies, are destined to remain theoretical due to a combination of factors such as economic priorities (particularly the pull of the EU system), national sentiment, underdeveloped legislation and political culture including avenues for public participation, and a general ambivalence toward the environment on the part of modern Lithuanian society.

Chapter 2: Politics and the Environment in Energy Planning

2.1 Introduction

The following two chapters use case studies of environmental decision-making in Lithuania to highlight the interaction of political, economic, social, and environmental factors in Lithuanian policy-making. This chapter focuses on the two issues which have dominated the Lithuanian energy debate since the restoration of independence; the construction of an oil terminal on the Baltic Sea coast and the future role of nuclear power in electricity production. It illustrates that in both these cases, the protection of political and economic vested interests, a nationalist-based desire for energy security, particularly electricity, and a determination to be independent from Russia have been overriding factors in decision-making. These issues are put in context by first describing Lithuania's energy situation and energy system.

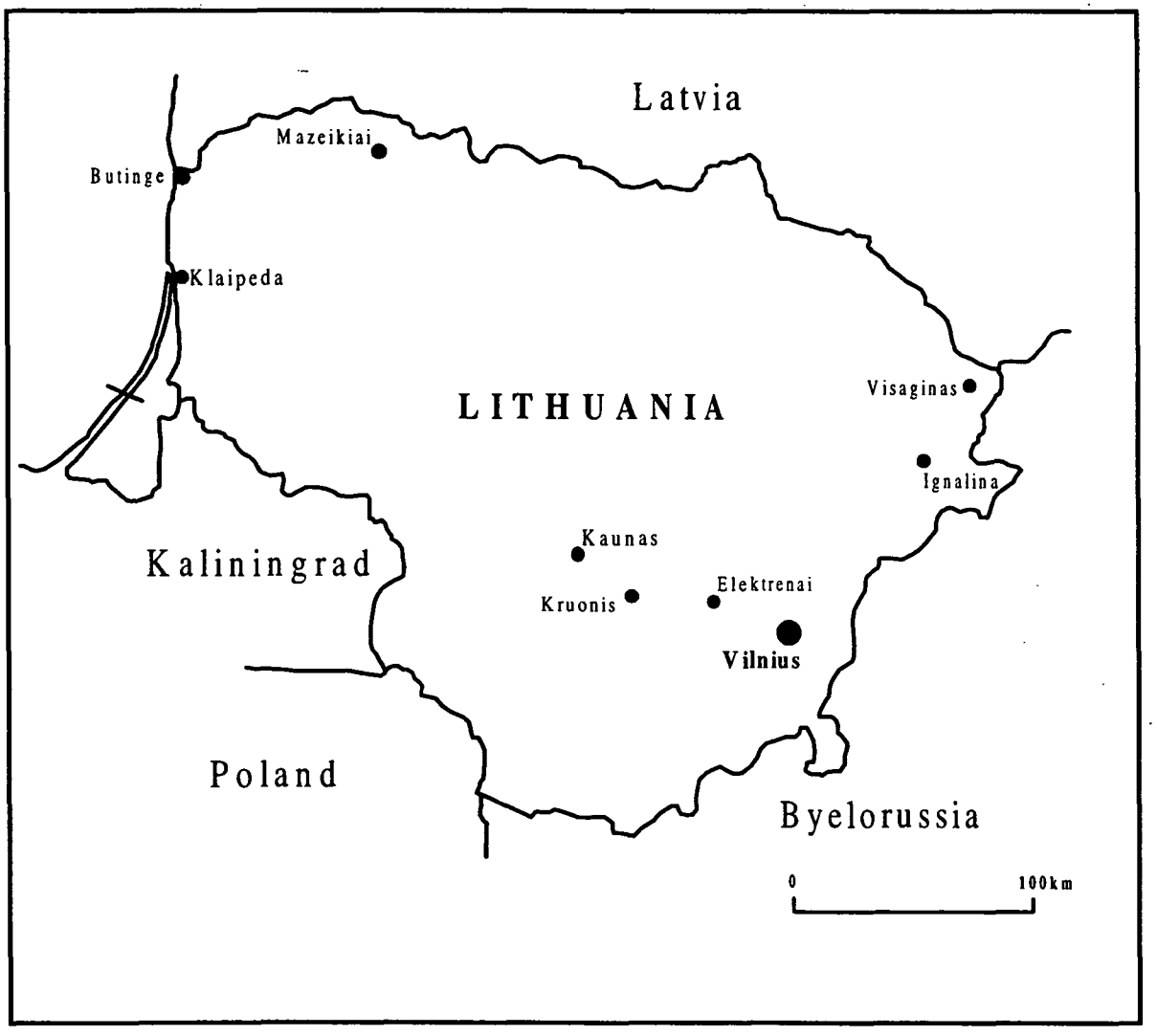
2.2 Background: Lithuania's Energy Crisis

The former reliance on the Soviet Union for energy supplies has left Lithuania in a difficult position with a legacy of 'energy-related pollution which must be tackled as the main priority for environmental policy' (Hughes 1992:75). Like other countries in the region, Lithuania is now in a historically unique situation in which it is experiencing simultaneously, 'falling energy demand and a process of wholesale economic restructuring' (Fisher 1992:2). The important question that this situation raises is whether the emphasis of Lithuanian energy planning should now be energy production or conservation. The latter holds considerable potential for environmental improvements and would be expected to be the energy strategy chosen if Lithuania was actively working toward an environmentally sustainable society. It has been suggested, however, that in most former communist countries, the emphasis of energy planning has been increasing production (with the debate focusing on what types of energy production should be used) rather than restraining growth in demand (Fisher 1992:2).

As an energy-intensive economy with few natural fuel resources of its own, Lithuania is destined to be an importer of oil and gas. This fact seems

disturbing to the country's nationalists. The reason for this is that after 50 years occupation, reliance on any one country (particularly Russia) is widely considered to be an unacceptable risk. It is a view that has influenced energy trade. Although Lithuania has potential to be the largest exporter of electricity in the region, the bulk of this would be generated by the Ignalina Nuclear Power Station (NNP) located at the town of Visaginas just north of Ignalina (see Figure 2.1). One of the arguments of this chapter, however, is that not only would such a strategy be incongruent with an environmentally sensitive energy policy but it cannot be justified on economic grounds.

Figure 2.1 Location of Energy Centres in Lithuania



Economic hardship associated with the transition to a market economy has been exacerbated by Russian economic blockades, particularly in energy supply. At the same time, environmental concern appeared to wane (see Chapter 4). This tension between economic and environmental concerns was already painfully clear, and was especially acute in regard to energy policy. The

limited availability of hot water, heating, and gas during the cold winter of 1992/3 made it one of the most memorable in the minds of most Lithuanians. Temperatures fell to minus 20° C while no hot water was provided and central heating was fixed at around 14°C (Jeziorski 1993a:B2). The impacts on well-being and morale and the political ramifications were considerable. People rapidly became disenchanted with a democratic market system so demonstrably incapable of creating a better life in Lithuania and expressed their disenchantment by voting for the Lithuanian Democratic Labour Party (LDDP - formerly the Communist Party of Lithuania) at the Parliamentary elections in October 1992 (see 7.2.1.2). Under such severe economic conditions, the advantages of the new system in which only a few seemed to improve their standard of living were difficult to recognise. As Chapter 4 demonstrates, the economic conditions have also contributed to a decline in Green support and the political salience of environmental issues in Lithuanian society.

Lithuanian energy policy also has important implications for political relations with neighbouring countries and vice versa. First, the break in relations with Russia impinged immediately on the supply of oil and gas since Russia was previously the sole supplier of those fuels. The subsequent shift to market prices, regardless of supplier, was strongly felt:

> The rise in the cost of Russian oil and gas has been one of the main factors which so far has frustrated the Baltic belief that freedom from Moscow's diktat would bring automatic efficiency and prosperity (Lieven 1993:333).

Second, occupation-related fears have been fuelled by right wing Russian politicians, such as Prime Minister Vladimir Zhirinovski, who have openly declared their intention to reclaim the 'near abroad' (Rich 1992:12). This contributed to the cultivation of a strong national sentiment which has impacted on relations with other countries in the region, thereby creating a barrier to cooperation (see also Chapter 4). All of these impacts have had important implications for the state of the environment since they have affected the balance in energy policy and planning between environmental protection and other goals.

2.2.1 Soviet Energy Policy

In the USSR, preoccupation with industrial development arose with a philosophy that big was better, huge was best, and science solved all the problems (Peterson 1993:11). As a result, centrally planned economies were

skewed toward heavy industry. These industries, moreover, consumed large amounts of energy:

> This sectorial specialisation as well as resource-intensive production technologies and the extraordinary price distortions which encouraged wasteful consumption patterns, have resulted in economies which use 2-3 times as much materials and energy per unit of economic output as market economies. (Helsinki Commission 1992, Ch. 4:5)

The energy-intensive approach to Soviet production has had repercussions for the former republics and much of the blame and antagonism surrounding the energy crises is centred on Russia. As the sole supplier of oil and gas since independence was restored, Russia has had strong political bargaining power and the capacity to cause immense problems in Lithuania by blocking supply[1]. This has been compounded by the fact that Russia has been in the throws of an energy crisis itself since the mid 1980s. Faced with diminishing, easily accessible resources, once thought unlimited, the Soviet Union (and later Russia) was forced to review its energy policy. The need to increase the efficiency of energy production and use became clear (ten years after the "crisis" in the West), as inefficiency threatened to cripple the economy (Feschbach and Friendly 1992:136).

The Soviet Union at that time was richer in energy reserves than any other industrialised nation in the world, yet exploration and extraction was proving to be cost ineffective. Siberian oil, for example, used too much energy in extraction, even without including environmental costs. There were also technical problems with drilling and transport, and poor pipe maintenance which led to huge losses of oil even before processing. Thus, the use of oil decreased and gas increased. 'The paradox was one of poverty in the midst of plenty' (Feschbach and Friendly 1992:133-141).

Although it is clear that the Soviet Union's energy-intensive economy has left a legacy of inefficient technology, and that the centrally planned system has left the former republics unable to support themselves independently, responsibility now lies with the independent governments. Decisions and events that have taken place since secession demonstrate the difficulties

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1. Lithuania was able to use its electricity generation capacity to influence the removal of supply blockages by Russia. The government threatened to stop supplying electricity to Kaliningrad and Byelorussia if the supply block was not lifted which contributed to Russia's decision to resume supply (Salay *et al.* 1993:203).

these governments are having in keeping promises and balancing interests. The Soviet government's planned nuclear power station on the Latvian coast near Liepaja, for example, was abandoned on economic grounds prior to the Chernobyl explosion. Now nuclear power is, once again, gaining appeal as an energy alternative. Juris Ozolins, head of the international department of the Latvian Ministry of Energy and Industry, explains:

> "green" sentiments have declined after the energy shortages of the past winter. Two years ago, no one dared mention the possibility of a nuclear power station in Latvia. Now energy experts discuss it openly (Rich 1992:13).

In a similar case, construction began on an oil terminal near Tallinn, Estonia, under Soviet rule but was cancelled due to environmental concerns. The terminal has since been completed as a joint venture with a Finnish company (Rich 1992:13). A hydro-electric accumulation station, which stores unused energy from Ignalina until required in peak periods, was also initiated under Soviet rule but later abandoned on environmental grounds. Construction later recommenced under the new government (Karalius 1989, Kaniauskiene 1989 & Adomaitiene 1992a&b). The last of the above examples is interesting because it has further ramifications for nuclear policy and has become a pawn in the political manoeuvrings of the nuclear lobby in Lithuania (see 2.4.5.1).

2.2.2 Lithuanian Energy system

The Lithuanian energy system, although lacking indigenous resources, has a capacity almost twice that required for domestic use. This excess capacity occurs in the two main energy industries - oil refining and electricity generation. Despite being an importer of crude oil, natural gas, and coal, Lithuania has been able to export substantial volumes of refined oil products and electricity.

In 1990-1993, the total installed electrical generation capacity was approximately 5 680 MW (actual capacity is 5 200 MW since the nuclear plant was derated), producing, on average, 28 to 29 billion kilowatt hours of electrical energy per year (World Bank 1993:160). At the beginning of 1994, the maximum installed capacity was 5800 MW and the Ignalina NPP was the largest generator, representing 43 per cent of total generating capacity (Vilemas and Reichenbach 1995:528). The electricity transmission sector is extremely inefficient, with losses averaging 22 per cent. Part of the problem

is that the underground distribution network consists of oil/paper insulated lead-sheath cable, some of which is more than 50 years old. No modern polyethylene insulated cable has yet been installed (World Bank and IEA 1993:19). The provision of central heating is also inefficient in Lithuania, requiring about twice the amount of fuel used in developed countries (Vainius and Piksrys 1994:2)

2.2.2.1 Energy Balance in Lithuania

Tables 2.1 and 2.2 summarise the supply and use of energy in Lithuania at the time independence was restored. This information itself does not indicate anything unusual about the Lithuanian energy system as per capita energy supply (primary energy) and use do not differ significantly from the range observed in Western Europe, North America and Australia. In Australia, for example, primary energy use was 228 GJ/person in 1990, almost 50 per cent greater than Lithuania, while the Australian residential/commercial sector had almost exactly the same energy use, at 28 GJ/person, (Australian data from Bush *et al*. 1993:92). Significant differences between the Lithuanian energy use patterns and those of Western countries emerge, however, when

Table 2.1 Primary Energy Consumption in Lithuania (1990)[1]

Solid Fuels	Oil	Natural gas	Hydro-electric	Nuclear[2]	Total	Per capita
44.4 PJ (8%)	311.6 PJ (54%)	172.6 PJ (30%)	3.7 PJ (1%)	45 PJ (8%)	577.3 PJ	156 GJ

[1]Excluding all exports

[2]The primary energy of nuclear energy has been taken as the thermal energy released in the reactor. It is assumed this is converted to electrical energy with an efficiency of 39%. Total primary nuclear energy used in 1990 was 155.4PJ producing a total of 60.6PJ of electrical energy, 43.2PJ of electricity was exported from Lithuania. If all the exported electricity is attributed to nuclear energy, it can be argued that only 29% of the primary nuclear energy (i.e. 45PJ) should be included in Lithuania's primary energy use.

(Adapted from World Bank 1993:160)

Table 2.2 End Use of Energy by Sector in Lithuania (1990)

	Residential / Commercial	Industry	Transport	Agriculture	Other	Total
Energy use PJ	101	171	85	42	28	427
Per capita GJ	27.2	46.2	22.9	11.4	7.6	115
Percent (100)	24%	40%	20%	10%	6%	

(Adapted from World Bank 1993:160)

economic indicators are included with the energy figures. Lithuania's primary energy use per million US dollars of GDP in 1990 was 78 TJ, whereas in Australia it was just 15 TJ. Even though Lithuania has a much lower industrial energy use than Australia on a per person basis (Australia 74 GJ/person compared to Lithuania's 46 GJ/person), Lithuania uses about five times as much energy as Australia for each dollar of GDP. This high proportion of energy compared with GDP is related to the low thermal efficiency energy production and consumption technologies and indicates the failure of the Lithuanian economy to provide value added products (World Bank and IEA 1993:2).

2.3 The Oil Industry

The Lithuanian oil industry, is a major component of the country's energy system. Refining capacity is about twice that required to meet domestic needs. In the past, Lithuania imported large amounts of crude oil and exported refined products from its Mazeikiai refinery (see Figure 2.1). In 1990, Lithuania imported 402 PJ of crude oil and exported 133.5 PJ of refined oil products such as gasoline, diesel, and fuel oil (World Bank 1993:155 & 160). The Soviet system of controlled prices of oil and its products has made Lithuanian re-entrance into the international market difficult. The use of controlled prices has continued in Lithuania as it is not feasible to abruptly shift to market prices. However, price reform will be essential, along with regulation and education, in order to ensure energy conservation. In 1992, Lithuanian industries paid only 3.4% of market prices for crude oil and around 15% of gasoline prices (World Bank 1993:162)[2] (see also 2.5.3.1). While negotiating over prices with Russia, Lithuania has sent a clear message that it intends to seek oil from other sources (including Kuwait and Saudi Arabia[3]) by planning construction of a new oil terminal on the coast. As these new sources will require market prices for the oil, Lithuania will need

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2. The industry price for oil in January 1992 (converted from rubles) is recorded as USD 4.3 per ton while the average world market price is estimated at USD 128. The industry price for gas is recorded as USD 39.4 per ton while the average world market price is estimated at USD 265 (World Bank 1993:162).

3. Talks were held with the Kuwaiti interior minister on April 26 and 27, 1993 regarding oil supply and the possibility of Kuwaiti subsidies for the oil terminal and Mazeikiai refinery rehabilitation. Talks with a Saudi Arabian delegation were held in December 1994 at which time the Lithuanian Minister of Economics, Vasiliauskas, stated Lithuania was considering Saudi Arabia as an alternative supplier of oil since Russia's extraction rate had decreased by 2.5 times (The Baltic Independent, 4(159), 5; May 1993 and 5(243), B1; December 1994).

to gradually increase the price of energy.

Lithuania has also been investigating the possibility of exploiting its own oil reserves and in 1993 nineteen small oil fields had been explored in western Lithuania but only two are operative. Early estimates of oil deposits of at least 50 million tonnes on land and 60 million tonnes in territorial waters (see for example *The Economist of Lithuania*, vol. 3, 55; 1990 and *Respublika*, September 25, 3; 1992) appear to have been over optimistic and more recent estimates suggest that Lithuanian oil deposits amount to around 15 million tonnes, only 5 million tonnes of which can be feasibly extracted. This is approximately equivalent to Lithuania's current annual requirement (Brazauskas 1993:B1). Yet other estimates have included 100 million tonnes in deposits and 15 million tonnes available for extraction at a rate of 0.5 million tonnes per year (Karaliunas 1994:7). Some commentators have gone as far as to say that 'an oil drilling rig in the city of Vilnius is not improbable some time in the future' (Kemezys 1992:109). However, although indigenous oil has increased its share in Lithuania's energy balance[4], it is generally acknowledged that it will never provide self-sufficiency and Lithuania will continue to rely on oil imports. Lithuanian energy decision-makers have therefore focused on the strategy of obtaining oil supply from countries other than Russia.

2.3.1 An Oil Terminal for Independent Lithuania?

Independent Lithuanian governments have worked on the premise that regaining economic independence is a prerequisite for retaining political independence and this has, therefore, strongly influenced decision-making in Lithuania. Thus, national sentiment has impacted on the economic, social, political and environmental decision-making. As Chapter 4 discusses, national identity once tied pagan Lithuanians to nature[5] but now might become partly responsible for environmental pollution. The debate over the proposed oil terminal on the coast near Klaipeda is an example of how resistance to cooperation (whatever the reasoning) may have detrimental consequences for both the economy and the environment. It illustrates

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4. Oil production was 115 000 tonnes in 1995 (Energy for Sustainable Development Ltd (ESD) and Lithuanian Energy Institute (LEI) 1996:i).

5. See Banks, A. J., 1991; *Lithuania's Environmental Problems: Cultural and Political Aspects*; TUULSS, Sandy Bay, ch. 1.

how the current push for economic development in the country may lead to further environmental impacts, despite the mitigating effects of some international treaties and financial support.

There is currently an oil terminal at Klaipeda which acts as an import and export venue, but is not able to be supplied by tankers. When Lithuania was a republic of the Soviet Union, oil was transported by rail, refined at Mazeikiai[6] and then pumped to all three Baltic States and the Kaliningrad and St. Petersberg regions. Following Russia's "economic blockade" in response to Lithuania's declaration of independence in 1990, oil supplies have been inconsistent (Uzkalnis 1993). According to BNS reports, the present terminal has capacity to receive one tenth of the crude oil necessary to keep Mazeikiai refinery working and satisfy the country's demand (Staprans 1992). The proposal for a new terminal has become one of the largest environmental issues in Lithuania. Even among supporters, there is much disagreement about where such a terminal should be built.

Developments in the oil terminal debate have been closely followed as part of the research for this thesis. In 1992, interviews were conducted with university lecturers, public officials, politicians, members of the Green Movement and Green Party, students, and others with strong opinions on the issue. There are several important questions for the analysis of the issue. What are the preferred sites? What would be the environmental, social, and economic impacts of building the terminal? Does Lithuania really need an oil terminal? Who should have an input into the decision-making process? Who makes the final decision and on whose advice? Are there any alternative means for easing the energy crisis?

2.3.1.1 Selecting a Site

In 1992, when the interviews were conducted three options were under consideration: reconstruction of the present terminal at Klaipeda; construction of a new terminal at Butinge (further north near the Latvian border); and construction of a new terminal between Melnrage I and Melnrage II (old villages north of Klaipeda). A fourth option, a cooperative project with

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6. The refinery at Mazeikiai has a significant environmental impact itself which requires attention. See Banks, A. J., 1991; *Lithuania's Environmental Problems: Cultural and Political Aspects*; TUULSS; Sandy Bay; 56-61.

Latvia using the existing terminal at Ventspils was put forward by some Green groups but was generally disregarded by government. There was support for each option. The Butinge alternative was supported by various academics and the Klaipeda branch of the Green Party. The Melnrage site, which was agreed on in principle by the government while awaiting further research, was advocated by "Nafta" state oil company, the government, and the Vilnius Green Party. "Nafta" was prepared to accept the reconstruction of the Klaipeda terminal if Belgian and English specialists recommended it. Some members of the Green movement advocated working cooperatively with Latvia as an alternative to building a new oil terminal (see 2.3.1.2).

To place the alternatives in perspective, it is necessary to outline the arguments for and against each, as seen by those interviewed and as understood by the author. The arguments in favour of Butinge, and consequently for opposing the Melnrage and Klaipeda options, were stated by the Klaipeda branch of the Green Party (here-after referred to as 'the Green Party') as follows.

As Butinge is geographically closer to the Mazeikiai refinery than Melnrage expenditure on an oil pipeline would be reduced. The town, moreover, already has an industrial zone. They also noted that waste water treatment infrastructure was already in place at Butinge, further reducing capital outlay required if the terminal was constructed at Melnrage. The Green Party believes that Melnrage is the oldest village in Lithuania- older than Klaipeda- and therefore, that the cultural heritage of the town should be preserved. It also feared that construction of a terminal at Melnrage would involve relocation of inhabitants to apartment housing as growth of the industrial area would result in the clearing of forests and would push locals out.

While media reports claimed that 200 ha of forests would have to be cleared "Nafta" oil company insisted that only about half (120 ha) of that area of forest would need to be cleared. There was a commonly held view that the actual area cleared would be much greater than officially claimed. Paulius Kavaliauskas[7] (1992) pointed out that although the area of forest involved was not much in terms of Lithuania's total forest area, it was the only area of forest near Klaipeda and was therefore of ecological significance. It is also a Zoological-Botanical reserve called 'Giruliai'. The Green Party suggested

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7. A noted Lithuanian geographer who established the nature protection system used by the Ministry of Environmental Protection (see Chapter 7).

other areas near by which are less "valuable" scrub that could be used instead such as the ex-Soviet army grounds where trees were already cleared for training. The Butinge alternative would not involve the clearing of forests, there is a clear coast.

The Green Party also had concerns about Klaipeda as a site. Its members suggested that the prevailing westerly winds in the area made it dangerous to build near the city of Klaipeda as any poisonous gases produced in an accident would be blown over the city. It would also require the fencing off of a large area which would prohibit community access to the sea. The Green Party also pointed out that this would eventually increase the tourism impact on areas such as Palanga in the Summer.

The risk of oil spills was another major concern mentioned. In 1979/80 the Greek tanker *Globe Assimi* crashed as it was leaving the port and the subsequent release of oil affected areas down to Palanga, 25 km away. In 1987 the Soviet tanker *Antonio Gramsci* leaked large amounts of oil near the Finnish coast and caused the worst damage to date. More recently, oil spilled from an Estonian ship in January 1993. Although only 40 tonnes of oil was involved, the Estonian Environment Minister commented that if all the fuel had spilt it would have been the biggest environmental disaster in Estonia's history (Tammerk 1993a).

Other environmental concerns relating to the construction of an oil terminal at Klaipeda included the fact that it would be necessary to excavate a large channel and a long wall to allow the tankers to come in to port. This would impact on the local marine ecosystem and would visually pollute the coastal vista. The channel would need to be regularly dredged because of sand build up, preventing re-establishment of the aquatic fauna and flora.

Also, the proposed storage tanks would be 60 m high and 30 m in diameter. Currently they are about 20 m by 15 m. General practice demands that a levee of equal capacity is required around the tanks to catch oil in the case of leakage. This would also be of economical benefit because the spilled oil can be recovered and enables fires to be contained. This would need to be considered in Lithuania. If the terminal was built to such standards the area required could be larger than estimated and may, therefore, affect surrounding forests or recreational access to the coast. The huge size of these tanks would also create visual pollution.

The oil terminal has also been questioned on economic grounds, with local and international experts questioning the logic of such large investment. Zablockis (1992:3) expressed distrust of the government estimates of the cost of construction, arguing that they would be at least 4 times higher and warned of the ramifications for Lithuanians who would have to bear the burden through increased taxes. According to Belgian consultant, Dr Ralph Molenarr who was part of a team of experts investigating the financial aspects of the proposed rehabilitation of the Klaipeda terminal, plans to build a new terminal are not economically justified. Molenarr commented that since oil would still be supplied by Russia, to import oil from elsewhere 'would be stupid' (in Jeziorski 1993b:B3).

2.3.1.2 Co-operation with Latvia?

Views on the option of relying on the Ventspils oil terminal were sought from those interviewed. Many argued that the goal of Lithuanian economic independence required construction of a domestic oil terminal and that it was risky to cooperate with Latvia since no-one could predict future Latvian relations with Lithuania. Such sentiments appear to be at odds with the remarkable sense of unity and cooperation of the Baltic nations that was shown to the Western world in 1989/90. It is also at odds with the worldwide trend toward international trade and economic cocooperationoperation. But the fear of foreign occupation and the strong desire to remain independent are now obviously dominant features of Lithuanian decision-makers and, indeed, the general population. As understandable as this is, it appears to have led to some illogical consequences, such as building a second terminal within a very short distance of an existing one over the border. The decision, however, was not based purely on the desire for autonomy and many economic, political, social, and environmental issues also impacted on the decision.

Some critics called the Ventspils option, "crazy Green thinking", yet openly suggested that Latvia could use the refinery at Mazeikiai which also worked below capacity. Of course, Latvia might also choose to build its own refinery which would lead to two terminals and two refineries within 200 km. Such a situation would lead to an increased actual and potential environmental impact despite the availability of a more reasonable cooperative solution. Ramunas Povilanskas (1993) outlined some of the issues. The possibility of Latvia building a refinery was aired but, due to the power needs of such a

refinery, it was suggested that construction of a nuclear power station was being considered. Whether or not this represented an accurate account of decision-making in Latvia, it clearly demonstrates the tendency of such development projects to snowball and result in a far greater environmental impact than first predicted, and much greater than would be caused through cooperation.

The Ventspils terminal has had an immense environmental impact on the local area and thus, cooperation with Latvia would require significant redevelopment. Latvian environmentalists, along with residents of Ventspils, have expressed concerns over the impacts of the existing oil terminal to human health. They point to increased incidence of health problems such as bronchitis, asthma, dermatitis as well as more serious allegations of increased abnormalities in children. There have also been significant ecological impacts to the marine ecosystem (Jazukeviciute 1992:4). Simenas, a former Lithuanian Prime Minister, claims that cooperating with Ventspils would be more harmful for the environment than would constructing a modern terminal constructed to international ecological standards (Simenas 1993). The counter argument is that a joint venture with Latvia, with the money being used to re-develop the Ventspils terminal in order to make it more ecologically sound, could be a viable and environmentally acceptable option. Besides which, international conventions such as the Baltic Sea Declaration and the Helsinki Convention actually require countries in the region to cooperate in order to protect the Baltic Sea (Bergström 1992).

Whilst such problems might constitute reasons not to use the Ventspils terminal, they also highlight the potential impacts of a second terminal within near vicinity which might be avoided through cooperation. Even if total investments to improve Ventspils are greater than the cost of a new terminal, the Lithuanian share might be less than it would spend on a new terminal. In addition to economic benefits, total environmental impacts are less from a cooperative approach. For example, the impact on migratory birds, especially those listed as globally vulnerable or threatened, would be increased by the construction of another terminal. Lithuania, as a signatory to the Ramsar and Bern Conventions[8], has an obligation to protect such birds and their habitat. Fifteen seabirds listed in the Lithuanian red data

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8. See Table 7.1 on International Environmental Conventions binding on Lithuania.

book have been recorded near Butinge. Of particular concern is the impact on the population of globally threatened, Steller's Eider, *Polysticta stelleri*, which has a wintering site a few kilometres south of Butinge. The birds nesting in this area constitute around 5 per cent of the global population. It is expected that the proposed oil terminal at Butinge would have negative impact on the bottom dwelling molluscs, a major component of the Steller's Eider's diet. It is also possible that the birds would be forced to leave during the construction stage (Nafta Board of Directors and Institute of Ecology 1995:104-108). The Klaipeda Green Party, in promoting the Butinge option, appear to ignore such environmental impacts. This seems to be because they accept that an oil terminal is an issue of state significance and are not confident of cooperation with Latvia. This highlights the nationalistic bent of the Party and somewhat of a "not in my backyard" attitude toward selecting a site for the terminal.

What has been seen by the Government, "Nafta" representatives, some academics, and many of the general public as necessary for Lithuanian economic independence, is now being more seriously questioned. The so-called "crazy Green thinking" has since been given support by energy experts from the G-24 group (the 24 economically most successful countries in the world) and other foreign specialists not normally described as 'Green'. The G-24 group met in Tallinn and advised the Baltics to cooperate more closely, making particular reference to the need for co-operative use of the Ventspils terminal and the Mazeikiai refinery (Tammerk 1993b).

Co-operation with Latvia, therefore, appears to be the most practical and environmentally sound option for meeting Lithuania's oil needs. The question of alternative sources of energy which would reduce such needs, although investigated, will not be discussed in detail in this section. (More detailed discussion of renewable energy sources is provided in section 2.5.2). It seems more pertinent to discuss a proposal which almost reached the implementation stage, the status of which still remains unclear, and which became one of the most discussed economic and environmental issues in 1992-4.

2.3.1.3 The Government's Arguments

Arguments from the government and "Nafta" are fewer but powerful in the eyes of many, and widely accepted by the general public. They claim that

Lithuania needs to have its own terminal as a major part of economic recovery. There seems to be a general consensus on this, even amongst some members of the Green Party. "Nafta" agree that the terminal should be as far away from Klaipeda as possible but insist that Butinge is not an economically viable alternative as new construction such as a lighthouse and emergency fire equipment would be necessary which would significantly add to economic expense.

Paulius Kavaliauskas also regards a Lithuanian oil terminal as necessary. He suggests that on ecological grounds alone, the Ventspils option is most advantageous, but supports the Butinge option despite this, with the Ventspils option kept as a possible future alternative (pers. comm., September 1992). The Klaipeda Green Party shares his view. It seems that while the benefits of cooperation are recognised, economic independence remains an overriding priority.

Basically, the major argument or rationalisation in favour of the development rests on the fact that Lithuania wants to have its own terminal for its economic independence and other arguments are mainly rebuffs of protests. This has been a powerful argument with the general population, well aware of the hardships caused by trading problems with Russia. The direct experience of the energy crisis, together with a strong nationalistic sentiment, has aided acceptance of the economic recovery argument. Claims that the oil terminal is necessary for independent Lithuania go unchallenged. Ironically, one of the major potential investors was the Russian company, *LUKoil* which has been actively lobbying for the construction of the terminal at Butinge. Their involvement was disapproved of by many, particularly the Landsbergis opposition in the parliament. Various discussions arose and the government stated that the Russian company would not have more than a 49 per cent share of investment.

Since the arguments have been in response to an energy crisis, it is important to ask what the alternatives for solving Lithuania's economic, and therefore energy, problems are. While greater cooperation was recommended by both the G-24 energy experts and consultants from Belgium, with the latter seeing the re-emerging plans to build a new terminal economically unjustified (Jeziorski 1993b), this does not address the question of what the alternatives for Lithuania's energy supply are. These are discussed in section 2.5.

2.3.1.4 The Decision-Making Process

The actual decision regarding Melnrage, which was agreed to in principle, came under some criticism by Paulius Kavaliauskas. The decision was based on a report signed by 19 prominent scientists stating that they approved of the Melnrage site. It was commissioned in May, 1991, to decide between Karkle and Melnrage. The Government argued that society must listen and heed the advice of those acclaimed scientists. According to Kavaliauskas (1992:2), this amounted to a falsification.

In the aforementioned article, Kavaliauskas argued that the formulations of the first study were erratic and that social ecology, recreation, and economical-geographical interests were excluded. This meant that the conclusions were not made on the basis of any accepted decision-making model but on haphazard reasoning. The Melnrage site was taken as the predetermined optimal site yet it is theoretically impossible to be the only possible alternative. Kavaliauskas (1992:2) argued that only two alternatives were put forward and the scientists simply chose the better of two evils. He considered the procedures of the second report listing Melnrage and Butinge as opposing alternatives, to be equally haphazard. He claimed there had been unethical manipulation of scientists' (Kavaliauskas 1992:2).

Despite not having been actively pursued as a preferred site, the small town of Kopustai was chosen by the government on February 19, 1993. It was claimed that the terminal would be some distance from the coast line and that the oil pipeline would be laid through Melnrage I and II without damaging the Giruliai forest or other important environmental features (*Europos Lietuvis* March 4 1993). If this was the case then some of the concerns of the Green Party would be accommodated.

Later, in May 1993, there were rumours that the government might back down on the construction of the oil terminal. Apparently this decision was made after receiving advice from various Western specialists which concurred with the arguments that the Green movement had been advancing for 2 years. This climaxed at a meeting between Latvian and Lithuanian officials in April in Riga to discuss the possibility of a joint venture between Ventspils and Mazeikiai. Following the meeting, Prime Minister Slezevicius expressed his support for the Ventspils option. It appeared to be a victory for the Green movement, but opposition still remained. It was not certain whether

the government would accept the findings of the committees involved. The director of the fuel department, Vaclovas Greza, said that 'without a terminal of our own, we won't be able to guarantee the continuity of supplies, nor have flexible and cheap oil prices' (Vilkelyte 1993:1). Opponents seemed to ignore the fact that cooperation with Latvia was in itself a security measure, since when each country has an interest in the cooperative arrangements, some level of security is ensured. Further, by building the terminal, Lithuania will create a competitive market which could disadvantage both Lithuania and Latvia as companies such as *LUKoil* secure the best price.

On June 16, 1993 (Resolution No. 435), the government decided to construct an oil terminal in the Baltic Sea that would accommodate imports and exports as well as the possibility of obtaining domestic supplies from drilling. The design involved reception buoys located approximately 7 kilometres from the shore where the water is deep enough to accommodate the manoeuvring of large tankers (80 000 tonnage) and at a distance of 3.3 kilometres for the mooring of smaller tankers (Nafta Board of Directors and Institute of Ecology 1995:8-11). In spite of earlier arguments regarding additional capital costs involved in building at Butinge, it was now the preferred site. The government argued that the site was chosen because it was considered safer in the case of an accident and no forests would need to be cut. Also, the required length of pipe necessary to reach Mazeikiai was around 22 kilometres less than from Melnrage (*Weekly News from Lithuania*, June 1-7, 1993). Prime Minister Slezevicius, who had openly supported cooperative options, subsequently announced on July 15, 1993, that construction on an oil terminal would begin at Butinge (*The Baltic Independent*, 4(171), B3; July 1993), but it is not clear whether this would be based on the platform-buoy design. At that stage, discussions were continuing with the European Bank for Reconstruction and Development (EBRD) regarding the finance which was estimated at USD 60-70 million and USD 100 million for the renovation of Mazeikiai refinery (*The Baltic Independent*, 4(171), B3; July 1993). About three months later, on October 20, 1993, the Latvian and Lithuanian Prime Ministers met to discuss the oil terminal along with an ongoing sea border dispute. Prime Minister Slezevicius stated that the required pipeline to Ventspils would cost more than building a new terminal and reiterated that such a proposal did not resolve the issue of Lithuania's energy independence. His Latvian counterpart expressed concerns regarding the impact of an terminal malfunction at Butinge, such as an oil spill, on the Latvian environment (Uzkalnis and Ozols 1993:8). Another

three months later, on December 17, 1993, the two Prime Ministers signed a protocol of intentions on the joint construction of an oil terminal in the Latvian port of Liepaja with a pipeline to Mazeikiai refinery (Uzkalnis 1994a:B2). Latvian concern regarding the environmental impacts of an oil terminal at Butinge on their coastline had been an influencing factor in the decision as had the reported difficulties involved in incorporating an oil terminal into a functioning port (Karaliunas 1994:11).

The Liepaja project fell through, however, on the grounds that the port was too shallow to accommodate large oil tankers and, in April 1994, the government awarded a contract to the American company Flour Daniel for the design and management of a USD 180 million dollar terminal at Butinge. Geological tests were initiated near Butinge and construction was expected to begin in 1994 and to be completed by 1996. Instead of the oil import and export terminal at Liepaja, it was reported that Latvia and Lithuania would jointly construct a smaller terminal designed for the import and export of light products only. The first draft of the agreement relating to this terminal stipulated a 51 per cent share for Lithuania (Uzkalnis and Ozols 1993:B1, Lucas 1994:B1, Karaliunas 1994:11, and Vilkelyte 1994:B1). The decision process had been reversed once more. Apparent concern over environmental impacts from the terminals and a recognition of the importance of cooperation had eventually led to plans for construction two new oil terminals! On announcing Flour Daniel as the successful tender, the Lithuanian government stated that there would be no major impacts on the environment (only two houses would need to be removed) (Vilkelyte 1994:B1) despite the critical role environmental issues had played in the previous decision to abandon the plan in favour of the Liepaja proposal.

Construction on the Butinge terminal, however, was halted after the Russian company, *LUKoil*, pulled out of the project on the basis that the proposal had not been properly financed. The company, potentially the terminal's most lucrative supplier, had been considered a core investor. Conservative Lithuanian parties had repeatedly warned of extensive Russian economic influence and welcomed the company's withdrawal. Others feared that without the financial input of LUKoil, the oil terminal would never be completed, particularly since its withdrawal might lessen the confidence of other investors (*The Baltic Times*, no. 37, 2; November-December 1996). Although construction of the terminal was to originally begin in 1990, at the time of writing (March 1997), the terminal remains incomplete.

It is evident that the decision about whether to build the terminal and, if so, where it should be built, has been a major controversy in Lithuania. The government appears to have vacillated and the preferred site has changed several times over the last 4 years (during which time there were two changes of government). Although information has been sketchy in the local press, let alone in English language papers, it seems that despite the advice of consultants, the G-24 energy committee, and other experts, the Lithuanian intention has been to persist with the option of building its own oil terminal. The view that a terminal will be necessary for political and economic independence appears to have been the critical factor. Following the withdrawal of LUKoil in November 1996, Deputy Energy Minister, Saulius Kutas, expressed confidence that the 'construction of the century' could still be realised in 1997.

The process of Lithuanian decision-making in relation to construction of an oil terminal demonstrates the interaction between economics, environmental concerns, and national sentiment. It is likely to represent a precursor to many difficult decisions the Government of Lithuania will face during the transition from command to a market system and an opportunity to test the resolve of the Baltic States to work together' (Uzkalnis and Ozols 1993:B1), a test they appear to have failed. It indicates how the desires for autonomy can have negative impacts on both the environment and the economy. As noted by Danius Lygis, environmental adviser to the Lithuanian parliament, during the decision-making process; 'strategic decisions were not based on the economic standpoint' (in Vilkelyte 1993a:1).

2.4 **Electricity Generation**

The second decision examined in this chapter is that of the future role of nuclear power in Lithuania. As mentioned in section 2.2.2, Lithuania has installed electricity generation well above the level required to meet domestic requirements. Approximately half of this capacity is made up by the Ignalina Nuclear Power Plant. Opposition to the plant in 1988/9 was a focus of dissent, with the existence of the large nuclear reactors seeming to represent the large colonial power of Russia. As an independent government, it has been necessary for Lithuania to evaluate whether the continued operation of the plant is justified. The purpose of the following sections is to demonstrate that it is technically possible for Lithuania to meet domestic electricity requirements without the use of nuclear power by using alternative sources

of electricity generation, together with improved efficiency and conservation. Like the oil terminal case, debate surrounding the fate of Ignalina NPP has been driven by vested interests and has provided little space for public participation in decision-making.

2.4.1 The Impact of the Chernobyl Accident on Soviet Energy Policy

Prior to the Chernobyl accident in 1986, it was expected that nuclear fission would close the gap between energy demand and fossil fuel stocks (Feschbach and Friendly 1992:134). Official propaganda instilled a strong belief that the Soviet system, and therefore its nuclear programme, was infallible. In the words of Yevgenii Velikhov, a physicist and leading member of the Soviet Academy of Sciences, 'Before the Chernobyl explosion, many important specialists and political figures believed that a nuclear reactor could not explode' (cited in Peterson 1993:12). Even if such scenarios were considered, officials in Moscow admitted that the developers of the RBMK reactors did not perceive a need to include safety mechanisms to cope with failure caused by operator intervention as occurred in the Chernobyl case (see also 2.4.2.3).

The events surrounding the Chernobyl accident, and the causes of the accident, have now been retold many times. At the time of the accident, the Chernobyl no. 4 reactor was undergoing tests at very low power to check on safety aspects of the reactor under those conditions. The resulting explosion was caused by a combination of operator errors and safety design faults. It was not a nuclear explosion but a steam explosion. The tragic outcome was a large release of radioactive material. Worley and Lewins (1988) have provided an interesting summary of the accident and Martínez-Val *et al.* (1990) have examined the physical causes of the accident and analysed the propagating mechanisms inside the reactor core.

It could be argued that the lessons learnt from Chernobyl and the safety improvements being made at Ignalina make a repeat accident nearly impossible. The counter argument is that the extraordinary sequence of events leading to the Chernobyl explosion were unforeseen by those most closely linked to the operation of the reactor and so it is not possible to say with complete certainty that a similar accident (or some other accident based on a different chain of events) could not occur at Ignalina.

While the accident at Chernobyl did not spell an end for nuclear power in

the region, it did lead to a down-scaling of Soviet aims to quadruple nuclear generation between 1980 and 2000 (Ramberg 1996:8). In the wake of the accident, operations were halted at nine nuclear energy stations, construction was stopped at sixteen sites, and plans for more than two dozen plants were abandoned[9] (Ramberg 1996:8). Many of these decisions were the direct result of protest action. Protesters later expanded their concern to other sources of power such as thermal and hydro-electric schemes.

A joint energy development plan released soon after the accident by the Soviet ministries of energy and nuclear power canvassed three nuclear scenarios: generation of 30 million kilowatts of electricity per annum from nuclear sources; generation of 13 million kilowatts of electricity per annum from nuclear sources; or, 'if the negative attitude of the public and local authorities cannot be reversed', an end to construction of atomic energy stations (Feschbach and Friendly 1992:135). The plan needed to balance the economy's need for energy with the political and technical reality that energy production was increasingly high-priced and under attack from society on environmental grounds. The plan failed to comment on the lack of any serious attempt at improving energy efficiency although it was rapidly being recognised as the essential alternative both elsewhere and within the Soviet Union (Feschbach and Friendly 1992:135).

Although the Chernobyl accident altered the nuclear orientation of energy in the region, many energy bureaucrats and nuclear protagonists argued for the continued use of nuclear power. One senior energy bureaucrat insisted that there was no alternative to atomic energy in industrial areas which lacked local stocks of fuel (Feschbach and Friendly 1992:134-5). Feschbach and Friendly (1992:135) refuted this and argued that although this might be true from an economic point of view, from a political standpoint, 'he was whistling in a graveyard'. Similar arguments have been put by Lithuanian energy specialists and bureaucrats in discussing the fate of Ignalina NPP (see 2.4.3).

Despite the much advertised devastation caused by the 1986 accident at Chernobyl the other less serious accidents throughout the FSU, many

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9. Feschbach and Friendly (1992:134) record that two plants were closed, construction was halted on 39 stations, and 11 were cancelled. Although there is some discrepancy in the accounts, the actual number of nuclear facilities affected is similar - around 52 plants.

governments plan to continue to rely on (and even expand) nuclear power. The reasons for doing so are simple: maintaining energy supply and jobs (Perera 1993:29). Many governments in the FSU and CEE are convinced that nuclear power is the cheapest way to satisfy their electricity requirements, particularly since many have invested large amounts of money into either existing plants or those under construction. Worldwatch Institute surveys, however, suggest that electricity generated from nuclear plants is more expensive than from gas-fired plants if the costs of environmental impact, decommissioning, safety maintenance, and waste management are included. For this reason, the nuclear industry is declining worldwide (Adelova-Calta 1996a:12-14) (see also 2.4.4 and 2.5.1).

Andrei Gagarinsky, from the Kurchatov Institute in Russia, has argued that 'in conditions of economic crisis, nuclear energy becomes an island of stability in the power industry' (Perera 1993:31). The belief that nuclear power is indispensable also pervades the thinking of some Lithuanian energy decision-makers. The Lithuanian Deputy Energy Minister, Saulius Kutas, for example, believes that Lithuania 'cannot survive without nuclear energy' and claims that '[c]ountries all around the world [have] arrived now at the conclusion that atomic power is one of the best ways of obtaining "weighty" energy' (Kutas 1993:9). He has therefore recommended that a new modern atomic power station be built in Lithuania.

In November, 1992, energy ministers from Estonia, Latvia, Lithuania, and Byelorussia attended an energy summit. One topic of the discussions was the possibility of constructing a third reactor at Ignalina. The Estonian Deputy Energy Minister defended the plan as a necessity for the future of the Baltic region (Jeziorski & Oll 1992: 6). This view ignored the allegation that two thermal power stations, with a combined capacity to supply around 50% of the Lithuania's needs, lay dormant (Jeziorski 1993a:B2) (see also 2.4.2). Although, the idea of constructing a new nuclear power plant has since been virtually abandoned in Lithuania, reliance on nuclear power is set to continue for some years to come as most nuclear protagonists aim to extend the design life of at least Unit 2 (see 2.4.3 and 2.4.3.1).

A major concern of the nuclear industry is that early retirement of the nuclear plant would result in the loss of highly trained nuclear physicists and other technical experts involved in the running of the station who would leave the country to pursue their careers. Jan Nistad, head of the

Swedish Nuclear Inspectorate's co-operative programme with Lithuania, warned of the consequences of such emigration of nuclear specialists; 'If they leave, you have a reactor which is not the safest in the world, operated by inadequately trained people - that would be a horrific situation' (cited in Jeziorski & Oll 1992:6). Ramberg (1996:24) noted that a similar problem exists in Russia and Ukraine where it arises from the difficulty of paying nuclear workers. Some plants have lost up to 20 per cent of their workforce, including supervisory personnel. In 1993, for example, around 150 personnel left the Chernobyl plant because wages were so far in arrears. In 1994, a further 13 personnel departed, including the plant manager. As a result, the station has been operated by a less experienced workforce, reliant upon on-the-job training (Ramberg 1996:25).

In the Lithuanian case, however, nuclear workers have not only been paid but have been given bonuses for working and living in a place of risk. The risk of a "brain drain" is therefore related only to the perceived effects of an announcement to close the plant. Far from being an appropriate reason for the continuance of nuclear power in Lithuania, the use of the "brain drain" arguments could be interpreted as industry scare tactics. The possibility of employees leaving in search of more challenging positions (though it seems unlikely for them to voluntarily return to Russia where living conditions are significantly worse than in Lithuania), could be reduced by a variety of strategies. Financial incentives to stay, such as a redundancy package available only after the final closure, could be offered. Or incentives in the form of new challenges could be created such as development of new methods for safe decommissioning of reactors. The two operating RBMK reactors are versions of the model used at Chernobyl and their design flaws have been constantly raised by environmental groups and the international nuclear community alike (see 2.4.2.1 below).

2.4.2 Ignalina Nuclear Power Generating Station

Ignalina Nuclear Power Plant is located in the east of the country in the town of Visaginas, close to the borders with Latvia and Byelorussia (see Figure 2.1). It is the largest of the 15 plants still operating in the FSU that use the Chernobyl-type RBMK reactors and is considered by some to represent the greatest environmental hazard in the Baltic Sea region (*The Baltic Independent* 4(190), 5; December 1993). Generating capacity at the plant is far greater than is required to meet Lithuania's own electricity needs, as it was

originally constructed under Soviet planning to service the whole north-west grid (Kaliningrad, Lithuania, Latvia, Byelorussia, and north-west Russia). The plan included the construction of four reactors at Ignalina and eight turbines at Kruonis Hydro-accumulation Station (see 2.4.5). Protest action halted the completion of the third reactor and plans for the fourth were abandoned. The plant now houses two reactors, the first of which was commissioned in 1983 and the second in 1986. The 1500 MW reactors are large by comparison with other reactor designs. For safety reasons, the plant is not run at full capacity and its designated total rated output has been derated to 2500 MW. The successful action to halt construction on the plant was part of a wave of environmental action at the time which was directed toward the Soviet Government. The plant has been regarded as a potential security risk owing to the mainly Russian work force as well as an intolerable environmental risk for Lithuania. Many interpreted the abandoned construction as a stepping stone to the eventual closure of the plant (Salay *et al.* 1993:203). However, following the restoration of independence, 'it became clear that there were strong interests within the government to maintain the electricity production at Ignalina' (Salay *et al.* 1993:203).

Many documents relating to Lithuanian energy, particularly newspaper reports or articles not dedicated solely to energy issues, have lamented the decision to continue operation of Ignalina NPP but point to the many difficulties associated with its closure. The main difficulty expressed in such documents is that Ignalina produces a large proportion of Lithuanian electricity. The implication has been that Lithuania cannot meet its electricity requirements without reliance on nuclear power. This perception of a necessary reliance on nuclear power has been so often repeated that it seems to have become entrenched in Lithuanian energy literature and in Lithuanian society.

While the World Bank (1993:155) figures indicate that Ignalina accounted for around 17 TWh, or about 60 per cent, of production in 1990, others have interpreted the figures differently and argue that Ignalina in fact produces much less than 60 per cent of Lithuania's electricity. Ruta Gajauskaite, a member of the Lithuanian Green Party, for example, claimed that Ignalina was producing less than 20 per cent of Lithuania's electricity (pers. comm., 1993). This confusion arises over the failure to distinguish between production and consumption. In 1991, Lithuania exported 12.75 TWh of electricity, or 44 per cent of the total amount generated, worth USD 660 million at world

market prices (World Bank 1993:155-6). If it is assumed, for arguments sake, that the electricity for export came only from Ignalina, then domestic electricity consumption from nuclear power was only 15-16 per cent of the total generated (including exports) (see Table 2.3) and just 8 per cent of the total primary energy use (see Table 2.1) or 4 per cent of actual energy use in Lithuania. Once exports are subtracted, the nuclear-generated electricity used in Lithuania amounts to only 26 per cent of the total electricity used in Lithuania (see Table 2.3). This would account for the figures used by Gajauskaite. In the debate over the fate of Ignalina NPP, the Greens have tended to use similar figures (local use) and this is likely to have been in order to demonstrate the feasibility of closing the Ignalina station. The Energy Ministry, on the other

Table 2.3 The Contribution of Ignalina NPP to Lithuania's Electricity Balance

	1990	1995	% Change
Total electricity generated in Lithuania	29.0 TWh	13.9 TWh	-52%
Electricity generated at Ignalina Nuclear Power Station	17.0 TWh	11.8 TWh	-31%
	59%[1]	85%[1]	
Electricity generated by non-nuclear plant	12.0 TWh	2.1 TWh	-83%
	41%[1]	15%[1]	
Electricity Exported	12.75 TWh	8.0 TWh	-37%
% of electricity generated at Ignalina	75%	68%	
% of electricity generated in Lithuania	44%	58%	
Imports	0.7 TWh	5.0 TWh	+86%
Total electricity consumed in Lithuania[2]	16.95 TWh	10.9 TWh	-37%
percentage of total electricity generated in Lithuania	56%	78%	
Electricity generated in Lithuania and used in Lithuania	16.25 TWh	5.9 TWh	-64%
Electricity generated at Ignalina used in Lithuania[3]	4.25 TWh	3.8 TWh	-11%
as a proportion of total electricity generated in Lithuania	15%	27%	
% of electricity used in Lithuania generated at Ignalina	26%	35%	+9%

[1] Percentage of total electricity generation in Lithuania for the corresponding year
[2] Including transmission losses and energy sector use
[3] Assuming that all exported electricity was generated at Ignalina
NB figures have been rounded

hand, has tended to use the figure of 60 per cent or more (total production) and this may have been done as part of an attempt to convince Lithuanians that the country could not survive without nuclear power.

Events over recent years have dramatically altered the situation. Between 1990 and 1995 energy consumption in Lithuania dropped significantly, as did exports, due to economic recession in both Lithuania and in the countries normally importing electricity from Lithuania (Byelorussia, Kaliningrad, Latvia). Lithuania was therefore left with excess generating capacity. As a result, generation at the thermal power station at Elektrenai virtually stopped, producing only 50 MW average from a capacity of 1800 MW. This decision was also influenced by the unreliable nature of oil and gas supplies required for its operation. Production from Ignalina also decreased. Despite its large excess generating capacity, Lithuania actually imported more electricity than it exported in 1994. In 1995, the exports were again greater than imports. Has the contribution of Ignalina changed during that time? What proportion of electricity consumed in Lithuania does it produce?

The amount of electricity generated in Lithuania between 1990 and 1995 decreased by more than 50 per cent (from 29 TWh to 13.9 TWh), the contribution from Ignalina decreased by almost one third (from 17 TWh to 11.8 TWh), and the amount generated by non-nuclear sources decreased by 83 per cent (from 12 TWh to 2.1 TWh). The large decrease in the latter was due to the virtual closure of Elektrenai. As table 2.3 demonstrates, Ignalina accounted for about 85 per cent of total electricity generated in Lithuania in 1995. While this proportion is greater than in 1990, the percentage of Ignalina-generated electricity used in Lithuania remained quite low. Again, if it is assumed that all exported electricity has come from Ignalina, this would mean that 3.8 TWh of nuclear-generated electricity was used in Lithuania. This amounts to 27 per cent of total electricity generation and 35 per cent of the total electricity used in Lithuania (10.9 TWh including imports, energy sector use, and transformation losses). The small shortfall in production estimated in 1990 had Ignalina not operated could therefore feasibly be made up from renewable energy resources and improving energy efficiency (see 2.5.2 and 2.5.3). While the amount of Ignalina-generated electricity used in Lithuania in 1995 could not all be replaced by renewable sources, the larger proportion of electricity used in the country that was produced at Ignalina that year was a consequence of the virtual closure of Elektrenai together with the reduction in exports. The 1990 provides a clearer picture in terms

of what is technically possible, given that the electricity system was operating to capacity at that time.

There are two important points to be made regarding the situation in 1995. In response to the decrease in demand (both domestically and externally), the Lithuanian Government chose to virtually close the largest thermal power station (Elektrenai). Another option may have been to close one unit at Ignalina NPP. All areas of production and consumption have decreased but the contribution of the thermal power plants dropped the most, increasing the proportion of Ignalina-generated electricity used in Lithuania compared with 1990. There were, however, political and economic reasons for the choice to reduce thermal production. The point to be made here is that Ignalina produces a small percentage of the electricity used in Lithuania, despite a myth to the contrary. Export revenue no longer seems to be an obvious advantage of nuclear power either. The possibility of improved electricity export levels in the future, which could be used as a justification for nuclear power, is limited by Russia's competitive edge in supplying Byelorussia and Kaliningrad with electricity.

The main conclusion from a World Bank and IEA (1993:iii) report on supply options in Lithuania indicated that, based on various scenarios of high and low demand, fast and slow economic growth, and high and low nuclear options, little or no new capacity would be required, even in the high demand scenarios. Table 2.4 shows that the installed electrical generation capacity of *non-nuclear* sources in Lithuania was technically sufficient to meet Lithuania's requirements in 1995. Present consumption patterns indicate that the capacity is actually about 1.5 times the required level (see Table 2.4).

Table 2.4 Non-nuclear Generating Capacity in Lithuania in 1995

End use of electricity in Lithuania	6354	GWh
Electricity generated including 22% transmission losses	8146	GWh
Internal power plant electricity use[1]	2858	GWh
Total electricity generated for Lithuanian use	11000	GWh
Average capacity required to meet 11 000 GWh generation	**1256**	**MW**
Total available non-nuclear installed capacity[2]	2627	MW
Non-nuclear generating capacity (assuming 70% load)	**1839**	**MW**

[1]Includes 1521 GWh for operation of Ignalina and 537 GWh used for pumped storage
[2]Excluding pumped hydro storage capacity (approximately 600 MW)

2.4.2.1 RBMK Reactors

Whilst the sequence of events leading to the accident at Chernobyl could be described as unique, having been initiated by a series of safety violations and operator errors, ultimately 'the accident took place and reached catastrophic magnitudes due to the features of the RBMK reactor' (Martínez-Val 1990:371). RBMK reactors have a number of unique design features. They are graphite moderated (i.e. use carbon rods as one of the main control mechanisms for the rate of the nuclear reaction). They have no containment pressure vessel and therefore no 'second line of defence' against leakage of radiation in case of an accident. They use a direct cycle boiling water process for generating electricity which provides good efficiency and makes them safer than some other designs (Nero 1979). Under normal operating conditions the physical processes taking place in the reactor tend to slow the reactor if something goes wrong. The weakness of the RBMK reactor, however, is that under conditions of low power it is possible to get sudden 'excursions' (i.e. rapid power increases) which are difficult to control. Approximately 2 500 hollow vertical channels run through the 12m by 7m graphite moderator. Within 1 700 of these channels are pressure tubes which house 30 000 reactor fuel rods in bundles of eighteen. Cooling water circulates through the tubes, some of which boils, creating steam to drive two 500 MW turbines. Control rods inserted into the 211 graphite channels manage the power level in the reactor (Ramberg 1996:14). Figure 2.2 illustrates the basic features of the RBMK reactor.

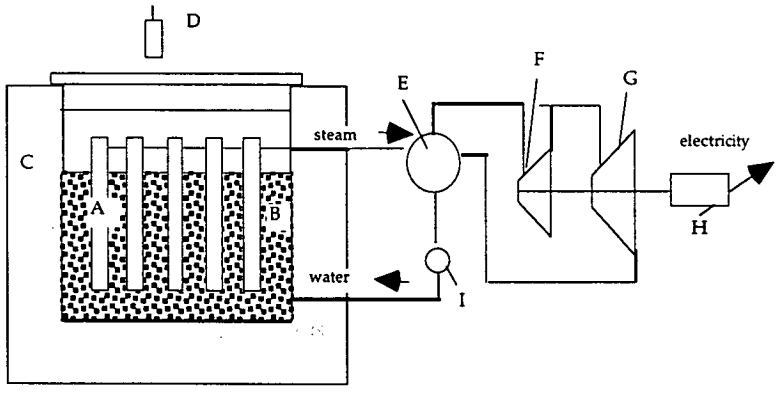
There seems to be a general consensus that RBMK reactors are unsafe due to several design faults. Originally intended for military production with capacity to also produce electricity, the RBMK reactors were constructed with little attention to nuclear safety as it is understood in the West. Improving such reactors is not a feasible option. Yuri Vishnevsky, head of the Russian Government's commission on nuclear and radiation safety, is reported to have said that:

> no amount of modernisation and upgrading will bring [RBMK designs] up to the safety standards of today's Western reactors: they lack containment vessels that would hold radiation in if the reactor was breached, the instrumentation is inadequate and the pressure tubes carrying coolant are brittle. In short, they pose a potential threat to life (Perera 1993: 29-30).

One of the major problems with the reactor type is the "positive reactivity feedback" or "positive void coefficient" which means that if the reactor runs

faster in low power areas, the heat leads to a faster reaction rather than the natural tendency to quench the reaction (in United States Senate Hearing 1992:23). In the pressurised water reactors used in the West and in much of the FSU and CEE, there is a negative void coefficient whereby the formation

Figure 2.2 A Schematic Sketch of an RBMK Reactor



A - The reactor is driven by a lattice of fuel assemblies each consisting of rods of uranium dioxide fuel, control rods, and cooling water channels (the water is converted to high pressure steam through the heat given off in the nuclear decay of the uranium).

B - The reactor core contains the lattice of fuel assemblies. It is graphite and is roughly 7 meters high and 12 metres diameter.

C - The core is surrounded by a biological shield of concrete, sand, water and steel, which absorbs radiation escaping from the core.

D - Above the reactor is the refuelling machine which can be operated remotely to replace individual fuel assemblies once the uranium dioxide is 'used up'.

E - The high pressure steam from the reactor is separated from water which is carried out with the steam. The 'dry' steam passes through a high pressure turbine (**F**) and then a lower pressure turbine (**G**) before returning, via a condenser, to the steam separator. The turbines drive the electrical generator (**H**). Water from the steam separator is pumped, at high pressure, back into the reactor (**I**).

of steam actually slows the energy generation (Ramberg 1996:15). According to Lord Marshall of Goring, Chairman of the Governing Board of the World Association of Nuclear Operators (WANO), one correction to this problem was available prior to the accident and was installed in reactors in the Russian plant at Kursk following pressure from the plant management. He asserts that:

> The tolerance of the large positive void coefficient and the omission of this extra protection system on all other reactors are the two basic blunders which led to the Chernobyl accident (in United States Senate Hearing 1992:9).

This may now have been improved to the best of Soviet technology, but several other faults render the RBMKs unsafe and therefore the possibility of another serious nuclear accident remains. The design failure to separate the critical electrical and fluid systems means that, in the case of a fire, the "independent" backup systems would also be subject to the failure. They have inadequate fire protection systems and are plagued by small fire incidents that would never occur in Western reactors. And frequent breaks in the 1600-1700 cooling pipes limit the effectiveness of the cooling system (in United States Senate Hearing 1992:24).

Another serious flaw is lack of a containment vessel. There is a confinement system that could accommodate breaks in a small number of the pipes but which would not be sufficient if there was a massive failure of the core, as there was at Chernobyl in 1986 (in United States Senate Hearing 1992:24). Poor quality of construction, including the use of poor quality concrete and metal, compounds their weaknesses in design. Technical equipment is an additional problem: instruments and control systems are poor; electrical problems are common, including occasional overvoltage; poor cable insulation; and control rods subject to failure due to problematic drive systems (Ramberg 1996:15). After visiting the Ignalina plant in 1992, Swedish experts were appalled at the lack of safety standards. They estimated that the likelihood of an accident at the RBMK reactors was 'hundreds of times higher than in Western European nuclear plants' (cited in Hinrichsen 1993:36). Others have asserted that safety improvements cannot bring the RBMKs (and the older VVERs) up to Western safety standards (Boyle and Froggart 1993:3).

Despite any improvements made to the reactors since the Chernobyl accident, the inherent design faults cannot be corrected without significant alterations and these would be more costly than a new reactor. Elizabeth Verville of the United States Department of State, in a testimony to the US Senate Energy and Resources Committee, concluded: 'we do not believe these plants can be practically upgraded to meet contemporary international safety standards; they should not be operated any longer than necessary' (in Ramberg 1996:16). What constitutes 'necessary' has been a controversial issue and one in which political and economic vested interests have been dominant (see 2.4.3). The World Bank and IEA study (1993:12) points out that safety

improvements made to Ignalina NPP 'are not intended to enable the units to operate beyond the medium term'[10].

The RBMK design and construction weaknesses conceivably increase the risks of deliberate damage and there have also been some fears of sabotage following threats to the plant in October 1994. A threat was delivered to the German Ministry of Environment which seemed to be connected with the release of underground criminal, Boris Dekanidze. This sparked concerns that Ignalina was indeed a possible terrorist target.

2.4.2.2 Environmental Impacts of Ignalina NNP

For the purposes of this thesis and in consideration of the limitations in terms of space, environmental impacts associated with nuclear power are considered well documented and are generally taken as given. There are some specific problems associated with the Ignalina plant, most of which relate to the use of water from Lake Druksiai for the cooling of the reactors. From an environmental perspective, however, the risk of a nuclear accident from RBMK reactors is the most serious aspect to be mitigated or resolved.

The most evident environmental impact is the thermal pollution of Lake Druksiai caused when the water is pumped back to the lake, with the temperature rising to 33° C in some parts. Many species of aquatic fauna do not survive such unnatural increases in temperature. The entire contents of the lake are used every week in cooling the reactors. Paskauskas and Sadauskas (1993) have described some of the scientific work being carried out in the vicinity of Ignalina which has revealed other ongoing problems associated with nuclear power in this area. 'Though the concentration of the investigated radionuclides in [Lake Druksiai] sediments have not yet reached the maximum permissible levels, they are quite close' (Paskauskas and Sadauskas 1993: 3). This raises the question as to whether the maximum levels set are too high. There have also been repeated references to the possibility that the plant has been constructed on a geological fault, with concern over the apparent movement of one reactor (see Lithuanian World Community and LGM 1989, Banks 1991, Vainius and Piksrys 1994).

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[10] The medium term is defined as the year 2000, the long-term refers to 2010 and low nuclear scenarios are based on an early retirement date of 1995 (World Bank and IEA 1993:iv).

Major accidents are not the only risk associated with nuclear power plants. There is a small, but measurable, release of radiation under normal operating conditions and minor incidents occur with alarming frequency. Some of these involve increased radiation leakage. Reports in *The Baltic Independent* claim that there have been several accidents of varying causes at Ignalina in the last few years. There were at least three in both 1992 and also in 1993, ranging from small fires, broken cooling pipes, and a leak of radioactive gas. According to Genadij Lipunov, deputy head of VATESI[11], the incident on 15 October 1992 involving a leak of radioactive gas could have caused a major accident had the plant not been shut down. It was closed for ten days (Jeziorski 1992:3). In 1996, Unit One was closed several times as a result of breaks in the cooling pipes and oil leakages, including a steam explosion in August similar to that at Chernobyl but which did not result in extensive radiation release.

Another serious problem requiring resolution in the near future is that of waste storage. Previously, waste was transferred to Russia but since the restoration of independence it has been stored on site. Viktor Shevaldin, the General Director of the plant, has stated that around 98 per cent of the storage capacity has been filled (Hindahl 1995). Unless the plant closes very soon, it will therefore be necessary to use storage containers purchased from Germany. Where the containers will be located and what compensation will be paid to those living within a fifty kilometre radius remain controversial issues (Ciucelis, pers. comm., July 31, 1996). Shevaldin argues that such containers will provide a 50 year respite before permanent storage options need to be considered. It seems that, in his mind, this is a sufficiently long enough period to negate the need for present concern: 'It will be a problem to be solved by our children' (Hindahl 1995). Such statements are incongruent with the notion of environmental protection for future generations, a fundamental facet of environmentally sustainable society (see Tiberg 1992:24, Banks and Sainsbury 1997).

2.4.2.3 The Deficit of a Safety Culture

Problems caused by unsafe design features have been exacerbated by a further lack of what has been termed a 'safety culture'. Western analysts have expressed concern over the almost blasé fashion in which Ignalina employees

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[11] The Lithuanian Nuclear Safety Inspectorate.

conduct their work, again a reflection of the entrenched faith in the infallibility of the Soviet system. This perception is demonstrated by the comment made by Saulius Kutas, then Energy Minister, that 'Ignalina power station is definitely safe' in spite of growing evidence to the contrary (quoted in Vilkelyte 1993:3).

As the previous sections have shown, even the international pro-nuclear lobby agrees that RBMK reactors have serious safety problems. The head of the Nuclear Energy Division of Siemens International (one of the world's largest constructors of nuclear plants) has stated that 'the only answer is to shut them [RBMK reactors] down as soon as possible' (Friends of the Earth 1992:5). The Nuclear Regulatory Commission is certain that, despite some improvements in the system following the Chernobyl accident, the overall design is still seriously flawed (in United States Senate Hearing 1992:23). There appears little need for further argument that RBMK reactors have significant design faults which render them an unsafe means of generating electricity.

Given the 'safety culture' deficit mentioned above, new equipment alone will not resolve the issue of safety at Ignalina NPP or other stations in the FSU. The failure has been in making energy production a priority over safety. As discussed in 2.2.1, the Soviet tendency to shroud potential problems by focusing on the "all powerfulness" of their technology led to misconstrued perceptions regarding the infallibility of nuclear power. In an official report released after the Chernobyl accident, the government acknowledged that:

> The developers of the reactor installation did not envisage the creation of protective safety systems capable of preventing an accident in the presence of premeditated diversions of technical protection facilities and violations of operating regulations which occurred, since they considered such a set of events impossible (cited in Ramberg 1996:22).

Anecdotes from visiting technicians and academics confirm some of the concerns regarding this safety culture. Following their October 1994 visit, Banks and Todd (1995:29) commented that:

> To the non-expert eye at least, the flickering fluorescent lights, corrosion on pipe joints, and patched sections of concrete, together with a seemingly blasé attitude toward risks, contributed to a general sense of unease. We left with a deep sense of concern over the possible future of this huge reactor.

Tony O'Donoghue, an engineer from Canada, recalls a similar experience.

Expressing his concerns regarding the quality control and maintenance of concrete strength he stated that 'structures in general looked sloppy and poorly built [which]...gives one the very unsettling feeling about the actual work and development of the reactors themselves' (O'Donoghue 1991:5). Ivan Selin, as Chairman of the US Nuclear Regulatory Commission, found the deficit of a 'safety culture' evident in the littering of flammable rags on the floor during his visit to Chernobyl. He noted electrical and fire hazards everywhere (Ramberg 1996:23) at a facility where you would hope the implications of poor safety were best known. Ramberg (1996:23-24) also noted several examples whereby employees of nuclear power plants in the FSU have failed tests on safety procedures and a large proportion of safety relevant incidents which reflect personnel and procedural failure.

2.4.3 Possible Options for Ignalina NPP

A decision to cease using nuclear power, or to at least close down those reactors which have serious design faults, such as the RBMKs, is ultimately dependent on values. While it is often argued that the closing of plants such as Ignalina is not economically feasible, Banks and Todd (1994) have shown that, if there was a commitment to do so, it would be possible to end reliance on nuclear power in Lithuania. Tables 2.1, 2.3, and 2.4 demonstrate why it would be possible. A commitment to end nuclear power, although economic problems must be considered, requires a certain perspective regarding trade-offs. What the government, or the people who elect that government, view as most important in terms of the risks involved with generating power from RBMK reactors (or from nuclear power in general) will ultimately affect the course taken. Interviews with politicians, greens, academics, and other citizens revealed that while there existed a high level of concern regarding the continued operation of Ignalina, a general feeling of hopelessness prevailed. Most people seemed to be convinced by the arguments of the Ministry of Energy that Lithuania could ill afford to close down Ignalina.

The time-frame for the inevitable closure of the existing reactors in Lithuania has been the topic of various reports. In 1993, a World Bank study was prepared in conjunction with the International Energy Agency (IEA) for the group of the seven richest nations (G-7). The report outlined ten scenarios based on various retirement dates together with fast or slow economic reform forecasts. In terms of the retirement of the reactors, early shut-down was set

at 1995, mid-term shut-down in the year 2000, and 2010 for the longer term (World Bank and IEA 1993:21-8). The report concluded that the most realistic option would be to retire the oldest unit at the beginning of 1995 and defer the decision regarding the second until the year 2000. It argued that this allowed some flexibility to retire the second unit early if demand made this feasible. The decrease in demand evident in Lithuania to date, however, has not been used as an opportunity to retire Ignalina. Another option suggested by the World Bank and IEA study was to derate both units to 1000 MW each, if demand developed on a low to medium path (World Bank and IEA 1993:iv-v).

In 1995 Ignalina was still running and the date for early retirement was postponed to 1996 or 1997 (see Banks and Todd 1995:41). The year 1997 was also suggested by Démarcq in 1993 who argued that immediate shutdown was not feasible whereas 1997 (as a low nuclear option) provided the time necessary for upgrading replacement facilities and developing alternative supplies (Démarcq 1993:7). At the time of writing (March 1997), Ignalina continues to operate and the date for possible early retirement has once again passed, with the mid-term shutdown date only three years away.

The *National Energy Strategy for Lithuania* argues that since there is insufficient demand to justify both reactors at Ignalina, one reactor should be shut down. The report's authors suggested that the oldest unit be decommissioned in 1996 and not re-started unless long term export contracts were signed. They also recommended that the second reactor be upgraded while the first was still operating. The report considered the possibility of a new reactor if one or both of the RBMKs were decommissioned and suggested that the viability should be established in advance so that Lithuania would be in a good position to evaluate the option closer to the end of the RBMK reactors' life (IC Consult *et al*. 1993:100). While the Consultants who prepared the report and their advisors at the Lithuanian Energy Institute should be commended for recognising the need to close the oldest reactor and to upgrade the second, their failure to consider the 'no-nuclear' power option appears to have been a serious flaw in the strategy.

A survey of 157 experts working in the fields of energy and environmental protection from government (parliament, Ministry of Energy, Ministry of Economics, Industry and Trade, Ministry of Environmental Protection, Ministry of Agriculture, and Ministry of Forestry), the Union of Farmers,

academia, other experts in planning and health protection, and employees from the plant was conducted by the Institute of Philosophy, Sociology, and Law in Lithuania. The survey revealed that most considered nuclear power to continue to have a major role in future electricity production. Despite airing strong concerns about environmental impacts and safety problems, the average estimate was that nuclear power will make up 48 per cent of electricity production in 2013, 44 per cent in 2033, 39 per cent in 2053, and 35 per cent in 2010 (Morkunas *et al.* 1993:6). Among those experts and officials interviewed, there was uncritical acceptance that Lithuania *must* have nuclear power. Despite some research and pilot projects into alternative sources, it was assumed that Ignalina would continue to operate. When plans for a third reactor were discussed at a Baltic energy summit in November 1992, for example, the deputy Energy Minister, Saulius Kutas, stated boldly that; 'I think Lithuania must use nuclear energy' (Jeziorski and Oll 1992:6).

Given this widespread belief that Ignalina must continue to play a role in electricity production in Lithuania, the issue of safety must be considered. Operating the plant to the end of its planned life carries serious risks yet officials hope to extend the operating life of at least one unit.

2.4.3.1 Replacing Channels

The problem with running the reactors to the end of their planned 25 year life (2010) is that the reactor channels should be replaced between 15 and 20 years after commissioning (2004 for unit 1, and 2007 for unit 2 at the very latest, with 2000 being more appropriate for unit 1) (Démarcq 1993:10). Other sources have given similar deadlines for absolute closing (see PROMENT LTD 1994)[12]. The Government of Lithuania made a commitment to the International Atomic Energy Agency (IAEA) **not** to replace channels which would involve serious procedural risks and prolong retirement, thereby increasing safety risks (Arturas Klementavicius, Lithuanian Energy Institute pers. comm., November 1994). The agreement not to replace the existing channels leaves only 3 years (with a maximum of 7 - 2004) until the oldest unit must be shut-down. Whether to replace the channels is, therefore, a

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12. It has been estimated that decommissioning will be completed 5 years after closure (PROMENT LTD 1994:7). Other sources point out that decommissioning is not complete until after isolation with the final stage left until 100-135 years after shutdown. This is to ensure radiated equipment has time to "cool down" leaving less radioactive waste and exposing workers to lower levels of radiation during demolition (Motluk 1995:6).

decision limited by technical realities and cannot be a question of values.

Given the almost nonchalant way in which experts referred to the idea of maintaining nuclear power with no definite answers to the issue of waste disposal nor clear estimates of the costs involved in either decommissioning the exisiting reactors or constructing a new reactor (if nuclear energy is actively pursued), it appears possible that the IAEA agreement will be broken. How could the Government be held to it? As Banks and Todd (1995:42) argued, if Lithuania has not prepared itself well for alternative sources of energy, when that ultimatum arrives, it is likely to be ignored with the excuse that Lithuania cannot abandon nuclear power because it has no other alternatives[13]. Rather than running the risk of operating even more unsafe RBMK reactors, it is possible that the IAEA and governments of surrounding countries would then grant a reprieve so that the channels could be replaced. In this way, Lithuania could "bribe" concerned countries in the region, using similar tactics to Ukraine over the decision whether to continue operations at Chernobyl or to decommission the remaining reactors. In that case, the Ukraine government agreed to close the remaining three reactors at Chernobyl, only as long as the West agreed to provide the USD 3 billion cost of doing so (Mackenzie 1995:10).

Interviews conducted in 1996 with energy researchers at the Energy Institute in Kaunas and a representative from VATESI, Rolandas Ciucelis, revealed that those involved in energy policy development do in fact intend to renege on the agreement with the IAEA. Several researchers claimed that the agreement should never had been made because the government officials involved were acting according to political motives and that the contracting parties [including the IAEA] were misguided in their information regarding the process of replacing the channels. The intimation from those interviewed, including the Director of the Energy Institute, Professor Vilemas, was that the decision-makers involved hoped that the agreement would not prohibit channel replacement when the time came to implement the procedure (pers. comm., July 10 1996).

The result of such intentions has been a continued orientation of nuclear

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13. The continued construction of further units at the Kruonis Hydro-accumulation Station, which stores electricity from Ignalina at periods of low demand, also suggests a planned future for nuclear power since the station is far less efficient when used in conjunction with electricity generated by the thermal plants (see 2.4.5).

power in policy development. An example of how this has occurred is the misuse of funding provided by the EBRD for safety upgrading. The EBRD has provided 33 million ecu (USD 44 million) for 18 safety upgrading projects. A condition of the grant was that funding should be used only for safety improvements, with 'no larger investments seeking to prolong the working life beyond the planed life' (Kutas 1996:8). In other words, the grant was conditional on the terms of the IAEA agreement not to replace the channels. Part of the grant was assigned for a report[14] on least-cost options for the development of the energy sector. In view of the agreement on channel replacement, the working group was obliged to ignore such options. It found the most economic option to be late closure of both reactors. While this would not breach the terms of the contract, a senior expert on the team, Vaclovas Miskinis, admitted that simultaneous calculations were carried out on the option of extending the life of the plant (replacing the channels). When questioned on some of the issues raised in the report, he responded by saying: 'in this report, we were trying to keep Ignalina [commissioned] for as long as possible' (pers. comm., July 10, 1996). In light of such an approach, scenarios are pointless. The idea was to come up with the "right" answer. That answer would have been to replace the channels had the terms of the funding not prohibited its consideration (officially). Much of the work being conducted with the funds focused on establishing an argument for extending the life, even if it could not be referred to in that particular report. Miskinis added that the decision regarding when to close Ignalina was a ultimately a political one. The irony, in light of his previous statement, was apparently lost on him. This example highlights the focus of energy specialists and bureaucrats.

If the channels are allowed to be replaced there will also be complications due to both the cost and implementation of the procedure. The cost of the replacement has been estimated to be USD 100 million per unit, further increasing the costs involved in retaining nuclear power (Démarcq 1993:10). This figure was also mentioned by the Public Relations Officer at Ignalina NPP (pers. comm., July 31, 1996). Vaclovas Miskinis, from the Energy Institute, claims that the actual amount required would be closer to USD 60 million per unit and this figure was used by he and his colleagues when estimating

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[14] Lithuanian State Power System and Lithuanian Energy Institute, 1996;*Republic of Lithuania: Least Cost Power Sector Development Programme - Final Report* ; Kaunas. The report was funded by the EBRD under contract no. 31-1030.4.5 and also had assistance from the EU PHARE programme for its preparation.

the least-cost options referred to above (pers. comm., July 10, 1996).

The procedure, which requires the unit to be shut down for several months, has been carried out only once before in Russia at Leningrad 1 (also known as Sosnovy Bor 1). The channels at Ignalina are different, owing to the higher power density of the 1500 MW reactor cores. In effect, therefore, a comparable procedure has not yet been performed (Démarcq 1993:10). Yet Rolandas Ciucelis, Senior Inspector with VATESI, appeared relatively disinterested in the issue when it was raised with him. He simply asserted that there would be no safety problem associated with changing the channels (pers. comm., July 31 1996).

2.4.3.2 Energy Planning

With the closure of Ignalina 3 to 7 years away (not a long period in terms of long-range energy planning) a decision must be made quickly regarding the development of future options, including the rehabilitation of the thermal power plant at Elektrenai, so that these can be put into place during that time. It has been seven years since Lithuania declared its independence from the Soviet Union, nine years since public protests were successful in halting construction of the third reactor at Ignalina, and more than ten years since the accident at Chernobyl. If a decision regarding the future of Ignalina is delayed, then risks will increase, less time will be available for securing alternatives, and more finances will be spent on improving safety. This money could well be better spent on the alternatives. Rolandas Ciucelis, pointed to the existence of a Fund established to accrue money necessary for either channel replacement or decommissioning. The Fund remains empty. This reason for this, according to Ciucelis, is that the Lithuanian State Power System owes money to Ignalina NNP (pers. comm., July 31, 1996). It also indicates serious inadequacies in the planning process.

The EBRD grant for safety upgrades will culminate in a Safety Analysis Report (SAR), 'serving as a base for continued operation of Ignalina NPP' (Vilemas and Reichenbach 1995:531). The SAR will be prepared by the Ignalina NPP operator and reviewed by an independent consortium of technical safety organisations to nuclear safety authorities in the UK, Germany, Italy, France, Lithuania, and Russia. It will provide the basis for the licensing of Ignalina NPP by VATESI if unit one is to be operated beyond 1998 (Vilemas and Reichenbach 1995:531). This report has had various completion dates[15] but

will not be completed until late 1997 or early 1998. If it is decided that unit one should be decommissioned and unit two should continue operating, the latter would only have approximately 9 years of its planned life remaining.

The sections above clearly demonstrate that those in control of the decision-making process are working on the premise that nuclear power will continue for a long time to come in Lithuania - replacing the channels will extend the potential life of each unit by 20 years. Many energy planning reports assume continued reliance on nuclear power[16]. Vilemas and Reichenbach (1995:532) refer to a Lithuanian Power Sector Development Programme which would include definition of the scenarios developed by the LEI as a condition of the EBRD grant. In doing so, they point to a time-frame of 25 years (with a focus on the next 5-10 years) but do not mention either channel replacement or the construction of a new reactor, indicating that they expect Ignalina to continue operating beyond its planned life[17] Even if the reactors are operated until the end of their planned life but after channels should be replaced (2008 and 2011), the time frame is significantly less than that assumed by Vilemas and Reichenbach. Vilemas (1995:721) stresses that nuclear power is one of the most promising options for Lithuanian electricity production in the future, arguing for the construction of 'safer and more reliable reactors'.

2.4.3.3 A New Nuclear Reactor?

The National Energy Strategy (IC Consult *et al.* 1993) canvassed the idea of constructing a new nuclear reactor for Lithuania in 1993. Former energy minister, Saulius Kutas, has been the most vocal proponent of this option. Kutas met with representatives from the USA company, Westinghouse Electric Corporation in July 1993 where the company promoted a new 600 MW reactor it was designing (Vainius and Piksrys 1994:10). The main argument in favour of such a proposal is the rational use of existing nuclear infrastructure and the mitigation of social and economic problems expected in the region from possible closure of Ignalina (World Bank and IEA 1993:42).

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15. Vilemas and Reichenbach (1995:531) noted mid-1996 as the expected completion date of the SAR. In July 1996, Vilemas said the report would be completed at the end of 1996 while Miskinis expected it in the first half of 1997 (pers. comm., July 1996).

16. See, for example, Lithuanian Energy Ministry et al. 1993 and IC Consult et al. 1993.

17. This time frame is longer than end of the reactors' planned life, even if the later dates offered by Vilemas and Reichenbach are considered. They claim the design life of the reactors will end in 2010 and 2015, giving them a life of 27 and 29 years respectively.

Construction of a new nuclear reactor after the retirement of the existing reactors, however, is itself complicated by economic and environmental issues. Although Karaliunas (1992:12) claims that a new nuclear power reactor is the most economical option for Lithuania, nuclear power requires large capital investment which is unlikely to be available within Lithuania. Traditional sources of capital outside Lithuania might also prove difficult to obtain. According to Inesis Kiskis, Regional Environmental Specialist with the World Bank in Lithuania, grants and loans are not made available from his organisation for building nuclear reactors (pers. comm., December 1994). Even if such loans could be acquired, it would mean further indebtedness for the Lithuanian Government with the benefits of the credits remaining in foreign hands. In addition, in order to meet such liabilities, governments often need to cut other funding, usually in the social (education, health, welfare) or environmental spheres (Fink *et al.* 1993:9). A report by the LEI submitted to the Ministry of Energy in 1992 suggested that a new reactor could be funded by electricity exports (Salay *et al.* 1993:203). The ability of Lithuania to retain export markets (at least those using existing network grids), however, is in question. Since independence was restored, exports have been reduced significantly by a decrease in demand within the main countries importing electricity from Lithuania (Kaliningrad, Latvia, and Byelorussia) (see Table 2.3). Thus, substantial export revenue is no longer available and the development of new markets would require even further infrastructure costs.

The idea of constructing a new nuclear power plant appears to have been largely abandoned amongst energy experts in Lithuania in favour of the plan to extend the life of the existing reactors. However, even in 1996, Kutas was still pushing for a new nuclear plant, arguing that Lithuania has limited indigenous resources and that the nuclear infrastructure is already developed (Kutas 1996:8).

2.4.3.4 Social and Economic Implications of Closure

Any plan to close Ignalina confronts the social problems associated with the possible retrenchment of 5000 or so workers and the impact on their families and the town of Visaginas (formerly Snieckus) which was built to service the plant. There are an estimated 32 000 people dependent on the plant (World Bank and IEA 1993:vi). While this is a major issue that would need to be addressed, the aforementioned survey indicated that 65% of respondents

believed that it was possible to develop light industry in the town, while 53% pointed to the micro-electronics industry and 48% suggested the development of reserves and forests (Morkunas *et al.* 1993:11).

The resolution to such problems is not discussed in detail in this case study. The main intention is to demonstrate the technical feasibility of Lithuania meeting domestic electricity requirements without the use of Ignalina and, in doing so, to highlight the political motivations behind plans for continued nuclear generation.

2.4.4 Western Involvement in Energy Options for FSU and CEE

Western involvement in the Soviet nuclear programme increased after the Chernobyl accident in 1986 and increased further after the breakdown of communism in the region in 1990/1. Funding has naturally focused on upgrading safety and improving training and management. However, a report by Friends of the Earth found that twice as much government money was spent on completing nuclear plants than on increasing safety, and three times as much if private investment was also included (Jenkins 1992:3). One major reason for this is the desire of governments to ensure that they are not held liable for any future accidents and it is believed that new nuclear plants create less risk than the existing Soviet models (Mackenzie 1995:12). The problem of liability is reduced by the newly independent countries becoming a party to international conventions assigning and limiting liability (such as the Vienna Convention on Third Party Liability) as well as becoming a member of the IAEA. Lithuania became a member on November 18, 1993 (Vilemas and Reichenbach 1995:531). In general, Western involvement has tended to prolong the use of nuclear power in the region both by upgrading safety (a necessary process in the short term), and by signing long-term contracts which give incentives to continue running unsafe reactors in return for much needed hard currency (Jenkins 1992:15).

Meanwhile, the IAEA has been accused of assisting the Soviet Union in covering up the consequences of the Chernobyl accident (Fink *et al.* 1993:9). According to its statute, the main objective of the IAEA is to promote the use of nuclear energy throughout the world (Fink *et al.* 1993:6) and restrictions on the use of nuclear power following the accident would have been inconsistent with such an objective. The opening up of EEC and FSU has actually provided the nuclear industry with an opportunity to reverse the

declining trend in its world market (Jenkins 1992:5). The post-communist region is an ideal place for the nuclear industry to obtain new contracts since there is experience with the use of nuclear energy with government aversion and public protest less likely. There are many vested interests within the countries which officials seek to retain. For the public, a new Western reactor appears attractive in comparison with existing antiquated unsafe designs. Western nuclear vendors have therefore been actively promoting the construction of new reactors (Adelvo-Calta 1996b:15). Thus, concern over the risks of nuclear accidents involving Soviet designed reactors in the region stems not only from altruistic concern regarding the serious risks to people and the environment but also from a concern over the impacts such an accident would have on the continuation of the industry. Comments made by the chairperson of the Hearing before the Committee on Energy and Natural resources in the United States Senate on the 'Safety of Soviet Designed Nuclear Powerplants', J. Bennett Johnston, tend to support such a perspective. The hearing was held in June, 1992 in Washington DC. In concluding the discussion, J. Bennett Johnston stated:

> the threat is not only to the people of the Soviet Union or Ukraine or wherever in Eastern Europe or otherwise that these reactors are located, but to the whole of Europe which receives the plume and also to the countries which have an extensive nuclear industry such as the United States, France, and Japan...[where] nuclear energy might be terminated as an effective option if you have another Chernobyl....Even though these reactors are totally different from those in the West and certainly in the United States, in effect, we have at risk a multi-hundred billion dollar industry in this country (in United States Senate Hearing 1992:69).

Despite numerous reports outlining the serious design faults inherent in the RBMK reactors as well as documented problems with the quality of Soviet materials and construction, the direct action required to reduce the risks to millions of people in the region are yet to be taken. In promoting the expansion of the nuclear industry and delaying, indirectly, the decommissioning of unsafe reactors, nuclear organisations and their supporters condemn countries such as Lithuania to risks they would not be prepared to accept in their own countries.

Much aid directed toward safety improvements at Ignalina has been bilateral. The Swedish Government, for example, provided USD 1.6 million per year for three years for research and safety upgrades (Jenkins 1992:17) and, following inspections from SKI and news of a minor accident during a visit from the King and Queen in 1992, pledged a further 40 million kronor for safety

improvements. It was rumoured that the accident may have been exaggerated as a tactic to encourage greater financial support from the Swedish Government. This is inconsistent, however, with the usual air of secrecy surrounding other accidents. Denmark, concerned over the impacts on its own country of an accident, provided DKK 2.8 million for safety systems between 1990 and 1993. Then, in 1994, a one year project 'Co-operation and Technical Assistance in the Field of Nuclear Safety and Radiation Protection' was initiated by the Danish Ministry of the Interior. The aim was to increase preparedness for an accident by installing monitoring stations for early detection of an emergency situation. The German government has also provided assistance toward improving the control of processes in the reactors. Not all such assistance has been from concerned neighbouring countries. Japan is funding training programmes in the areas of nuclear safety, accident prevention, and re-processing of nuclear waste. (Hindahl 1995, MEP 1994:18; *The Baltic Independent* 4(190), 5; December 1995, *The Baltic Independent*, 4(158), 7; 1993 and *The Baltic Independent* 3(133), 3; October 1992).

There have also been commitments and/or provisions of multi-lateral funding from the G-7 and G-24 groups, the EC Commission (USD 1.3 billion), and the International Nuclear Safety Fund which was established by Sweden, Finland, France, Germany, Italy, UK, and Canada. The grant of 33 million ecus (USD 44 million) mentioned in section 2.4.3.1 was provided from the Fund in March 1994 to the power plant particularly for safety analysis and improvements. The project was prepared in close cooperation with the EBRD, the Lithuanian Government, and Ignalina management. The EU PHARE programme which funds environmental projects in East and Central Europe and the Former Soviet Union began a similar project in 1994 with a budget of 50 000 ecus (USD 66 419) (MEP 1994:18, *The Baltic Independent* 5(208), B3; April 1994, and Rosendahl 1993:7).

While this is by no means an exhaustive account of money invested in safety improvements of Ignalina, it shows that a very substantial amount has been spent so far on improving the plant. Had Ignalina been shut down before now, much of this investment could have been directed toward developing alternative energy sources. Boyle and Froggart (1993) asserted that the investments have been a waste of resources given that the World Bank/International Energy Agency report indicated that the least-cost option was to a low nuclear scenario. They claimed that the Chernobyl accident cost around USD 300 billion plus 40 000 lives (to say nothing of other

environmental impacts) and the cost of phasing out RBMKs and developing alternatives amount to a further USD 1-3 per capita, a cost which Boyle and Froggart (1993:2) described as 'cheap insurance'. Of all the Baltic States, Lithuania receives the most international support for environmental projects. If international assistance provided specifically for improving safety at Ignalina is excluded, however, it has received the least funding (Swedish EPA 1995). This suggests that other important environmental projects have missed out on support (see Chapter 6).

Western nuclear groups have also been involved in monitoring and reviewing practices at Ignalina. The Swedish nuclear authority is involved in a joint Swedish-Lithuanian programme designed to raise nuclear safety standards (Jeziorski 1992:3). Scandinavian nuclear experts who inspected Ignalina in 1992, were 'horrified by the low level of safety and called for urgent improvements' (*The Baltic Independent* 3(127), 11; September 1992).

Various nuclear organisations - such as Siemens International, the World Association for Nuclear Operators (WANO), the United States Department of Energy, the IAEA, International Monetary Fund, the World Bank, and the EBRD - have examined the issue of nuclear power in the Former Soviet Union and Eastern Europe. While recognising that RBMKs as well as VVER 440/230s (pressurised water nuclear reactors) have several design problems that render them unsafe, with some recommending the closure of the most dangerous reactors, their conclusions have tended toward the short-term solutions of training and technological improvements. They have recognised the difficult economic situation in countries like Lithuania and therefore have focused on improving operational safety of the reactors on the assumption that dismantling these reactors is not feasible in the near future. Financial assistance programmes could also aid the construction of new Western standard nuclear plants (United States Senate Hearing 1993). So despite recognising that several international experts, including their own organisations, have recommended the immediate closure of RBMK reactors, none have prepared an outline or time frame for closure.

Friends of the Earth (FOE) has been highly critical of the solutions given by these organisations, arguing that they are mainly short-term and not in the interests of the citizens of the countries concerned. They point out that the in 1992, the G-7 Group aimed to spend around USD 800 million on improving existing reactors rather than on phasing them out. According to FOE, the

G-7's approach is based on four main objectives: to reduce the risks of nuclear accidents; to decrease air pollution by replacing old lignite and coal power plants; to create projects for Western companies specialising in nuclear power, given that they face a lack of contracts in the West; and to prevent a further loss of public support for the nuclear industry in both Eastern and Western countries (FOE 1992:2-3). Friends of the Earth supports the first objective but advocates a different approach to achieving that objective - the closure of all nuclear power reactors in the Eastern Bloc, beginning with the most dangerous and rapidly phasing out the remainder. According to FOE, the second objective should be achieved not through increasing nuclear power but rather, decreasing the energy intensity of the countries. The final two objectives are not supported by Friends of the Earth.

2.4.5 Kruonis Hydro-Accumulation Station

The Kruonis (formerly called Kaisiadorys) hydro-accumulation station (HAS) is located approximately 85 kilometres from Vilnius and 25 kilometres from Kaunas on the right bank of the Nemunas river near the settlement of Kruonis (see Figure 2.1). The station was designed to store electricity from the Ignalina NPP base load during off-peak periods. It was planned for the whole North West region of the USSR (as was the nuclear power station) under the belief that only nuclear and hydro-electric systems were efficient sources of power (Spudulis and Vasilyev 1993:33, World Bank and IAEA 1993:16).

The initial plan included nuclear plants together with pumped storage in Latvia (on the coast), Ignalina, and Byelorussia. Construction at Minsk was abandoned following the Chernobyl disaster in 1986. Construction on the Ignalina and Kruonis combination, the largest of the three combined nuclear-hydro systems planned, began in 1977 (World Bank and IEA 1993:16) and was the only one to have been constructed. A total of eight units (turbines), each with 200 MW generating capacity, was planned for the Kruonis HAS, but this was reduced around the same time that the third and fourth reactors at Ignalina were abandoned after strong reactions from the green movement. It was decided to halve the capacity and the agreement that was reached required constant monitoring and public information programmes. Eventually, only two of the original eight units were completed. When, under an independent government, construction was recommenced, it contributed to public frustration and, ultimately, to the decline in

environmental activism in Lithuania (see Chapter 4). According to the World Bank and IEA (1993:16), 'the environmental impact of the facility appears to be relatively benign'. However, serious concerns regarding the environmental impact of the project have been raised and these, along with other objections, are presented below. The information has been derived primarily from a series of interviews with energy and environment experts in Vilnius and Kaunas.

2.4.5.1 Arguments Against Construction

The primary argument against the construction of the Kruonis HAS was that the capacity of the planned system exceeded actual requirements by a very large margin. Such Soviet-style over-planning appears to have survived within the independent Lithuanian governments and is displayed most clearly in the area of energy planning, and energy planning associated with nuclear power in particular. Even the upper storage dam has been constructed in such a way so as to allow a doubling of the reservoir volume by extending the walls of the dam an additional 6 metres (World Bank and IEA 1993:16). A second concern related to the concentration of pollutants upstream from the proposed dam. It was found that these pollutants (including fertilisers, waste from chemical factories, and heavy metals) would accumulate in sediments on the bottom of the storage facility. It was felt that these sediments, and the act of damming the river, would have serious detrimental effects on the river's ecosystem. There was also some concern about the impacts of turbulence caused by high peak flow regimes. The fluctuations in water level, estimated to be between 0.6 m to 1 metre, would have several predictable consequences, including erosion of the river banks and damage to the breeding grounds of the fish species which deposit their eggs in the shallows. To the local residents, who do not have the numerous lakes on offer for residents of Vilnius and other cities, the Kaunas lagoon (the natural, lower storage area) is also a popular recreational area. The changes in daily storage would mean that the area of sandy beaches would be reduced, thereby decreasing recreational opportunities. There also concerns that the concrete was of such poor quality that the dam and the pipes were likely to fracture.

This debate occurred when the influence of the Green movement was strong, having been heightened by successful protests in 1988/89 against an oil drilling platform off the coast at Nida, a hydro-electric dam on the Daugavils River (Latvia), and of course, the construction of a third reactor at Ignalina.

Protest concluded after the government eventually capitulated and reduced the capacity by half - to four turbines and construction on the third was eventually also stopped in 1989. At the time, the Director of LSPS publicly stated that the existing turbines should not be operated. Under the pressure of economic change, a decrease in the importance of environmental issues, and an increase in concern over security of energy supply, the independent government of 1991/2 recommenced construction of the third and fourth turbines.

An argument for this recommencement was that the third generator had already been ordered under the old USSR pricing system. The cost of the fourth unit, however, was significantly higher. One of the decision-makers was Zigmuntas Vaisvila, previously a strong opponent of the project and leader of the Kaunas Green movement. This change in stance was to impact significantly on the future popularity and respect of the Green movement.

The example highlights how much easier it is to obtain public opposition to environmental degradation when it is perpetrated by an enemy or foreign government rather than a democratically elected independent government with a virtual mandate from the people. By 1991/2, the Greens were unable to generate the same level of public support that it had been able to in 1988-90. Its ability to attract public support was further eroded by the actions of some of its members, such as Vaisvila. It raised the question whether economic and political concerns of transition necessarily had to take precedence over environmental concerns, or whether the initially high level of Green support was merely an avenue for political dissent. These issues are discussed in Chapter 4.

The debate over the hydro-electric pumped storage scheme also had another interesting element of relevance to this discussion. Installation of four turbines married with the intentions of ardent supporters of continued reliance on nuclear power. Energy experts have since pointed out that four turbines amount to overcapacity, even if a new reactor is built. The use of pumped storage systems in conjunction with thermal power is less efficient than when combined with nuclear (since supply is easily more easily regulated in a thermal power plant), and more expensive than the cost of installing and operating new capacity (World Bank and IEA 1993:17). This raises the question of what the intended purpose of completing the four turbines has been. The answer, it seems is that once the all four units are completed, it

will provide another lever for proponents of a continued nuclear programme. Banks and Todd (1995:37) predicted that once the large investment in the Kruonis HAS had been expended, it was highly likely that the government would argue that it would be then rational to continue relying on nuclear power. Leading energy advisers have since also used such an argument.

Yet there are still costs involved in using Kruonis in the future. If Ignalina is operated beyond 2000, construction of the planned high voltage transmission line between Ignalina and Kruonis would become necessary in order for Ignalina to operate as a base load, evening out the demand peak. The total cost of equipment and installation would be about USD 48 million (World Bank and IEA 1993:43).

2.5 **Energy Options for the Future**

This thesis argues that nuclear power, particularly generated from RBMK reactors, is not compatible with an environmentally sustainable society. The thesis strongly promotes the decommissioning of Ignalina NPP and the rethinking of the necessity of a new oil terminal. Possible options for meeting Lithuania's energy requirements in the future, therefore, are presented below. They include increased use of renewable energy, realistic pricing of energy inputs and outputs, improved efficiency of energy production and supply, and energy conservation.

2.5.1 Life Without Nuclear Power

As Tables 2.3 and 2.4 demonstrate, nuclear power is not technically necessary in Lithuania. Although Ignalina produces large amounts of electricity significant proportions have been exported. Even when the energy balance changed, with Ignalina producing an even greater percentage of total production, this was strongly influenced by the virtual retirement of the thermal power station at Elektrenai. Although the energy balance has altered, available installed capacity in Lithuania remains the same (5 127 MW), with non-nuclear sources having an available capacity of 2 627 MW (excluding 600 MW capacity at Kruonis pump storage station). Lithuania's electricity consumption in 1995 required 11 000 GWh of electricity generation, allowing for transmision losses and electricity used within the energy sector (see Table 2.4). This could be easily supplied by existing non-nuclear sources (assuming secure fossil fuel supplies), particularly if energy efficiency measures are also

implemented. The large amount of generation required is influenced by the large proportion of electricity used in operating Ignalina NPP which would not be required in a non-nuclear system. Electricity would be required in electricity production from non-nuclear sources but this is signifcantly less than that used at Ignalina NPP. So, in effect, Lithuania could meet her energy requirements without the use of nuclear power. Such assertions, made by Banks and Todd in 1994 at an international conference in Prague, were met with the contention; 'you are wrong!' by Juozas Burneikis from the Lithuanian Energy Institute. Other energy experts also did not want to acknowledge this possibility. In 1996, the Director of the same institute, Jurgis Vilemas, admitted that Lithuania currently has sufficient energy sources to meet its electricity requirements without relying on nuclear power (pers. comm., July 10, 1996). To adopt such a strategy, he argued, would result in a doubling of the consumer price of electricity. Again the argument rests on economics.

In a statement released after a string of relatively minor accidents at Ignalina in August/September 1996, the Lithuanian Green Movement stressed that although the "cheap power" argument is popular amongst energy officials, the Greens believe that not all costs are included in the pricing. The amount spent on safety upgrades, for example, does not appear to have been included. An analysis of production costs at Ignalina NPP prepared by PROMENT LTD (1994) found that the 1994 Ignalina budget had not included all cost elements, significantly underestimating the cost of maintenance, fuel, overheads, insurance, and decommissioning. The estimations assume decommissioning in 2004 and 2010 to avoid channel replacement. When full costs of production were included, the cost per kWh almost doubled[18] (PROMENT LTD 1994:1, 13-18). In view of this, assertions that the cost of electricity production would double if generated at thermal power plants, may be misplaced or exaggerated. Worldwatch Institute studies have also shown the relative expense of nuclear power once all environmental and management costs are included. They estimate a nuclear power production cost in the United States of US 12 cents per kWh compared with US 6-8 cents per kWh for electricity generated from gas (Adelvo-Calta 1996a:14).

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18. The report by PROMENT LTD (1994:13-18) provides three revised budgets based on three different estimates of decommissioning costs, US 100, 200, and 300 million. The total production cost would rise from US 157.32 million to 287.7, 298.61, and 309.52 million respectively if all costs are concluded. The production cost per kWh would rise from US 1.1 cents to 2, 2.08, and 2.16 cents respectively if all costs are concluded.

Some safety costs are included in the calculations made by the LEI as part of the least-cost options report to the EBRD and PHARE Programme mentioned above. They tend to be focused on short term amounts necessary to keep Ignalina technically operational, rather than including all monies spent so far, all of which have been necessary for safe operation (see Lithuanian Energy Institute 1996). They certainly have not included a proposed 43 million Litas (USD 10.75 million) for civil security measures in the vicinity of the plant. The measures would include infrastructure to be used in the case of an accident such as evacuation points, improvements to roads and the communication network in the area, iodine and other medicinal provisions, and training exercises for those living in the area (Baltakis 1996:2).

There are of course other issues involved such as security of oil and gas supply and economic issues involved in decommissioning and in the price of electricity produced. The price of nuclear-generated electricity is increasing, as a result of price increases of nuclear fuel and spare parts supplied by Russia, thereby increasing the cost of producing electricity from Ignalina. As the value of the ruble plummeted in 1992/3, Russia demanded higher prices (in USD) for nuclear fuel supplied to Ignalina. The import price was raised to USD 60 000 per assembly and a later trade protocol called for USD 73 000. Ignalina requires 1 630 assemblies to operate for one year (World Bank and IEA 1993:12). This has affected export potential because prices for fuel and electricity produced have been kept low within Russia (Vilemas and Reichenbach 1995:531, Salay *et al.* 1993:202).

The independent governments in Lithuania have argued for an oil terminal on the premise that Lithuania should not be reliant on Russia for supplies (see 2.3.1.3 Yet this argument seems absent from the nuclear debate. The report by the World Bank and IEA (1993:12) referred to the Lithuanian Government's intention to seek other suppliers of nuclear fuel but it doubted that Western companies would supply the unique form of fuel for a price that could compete with that offered by Russia. The only way to avoid reliance on Russia is to build a new reactor which uses technology from outside Russia. But, as demonstrated above, this possibility has little practical relevance to the debate. The nuclear lobby continues to argue for a continuance of nuclear power in Lithuania, primarily through the replacement of channels, despite the fact that this would require reliance on Russian fuel rods and equipment.

Ultimately the decision is political, but the Lithuanian Government and pro-nuclear energy specialists have tended to disguise this in technical and economic terms. As noted by Gorz (1980:100), when such an approach is used, it is easier to disregard public opposition as uninformed. This has implications for the working of democracy in the country (see also 7.2.1).

2.5.2 Renewable Energy

The centralised, energy-intensive, heavily subsidised Soviet system placed little emphasis on the need to conserve energy, or indeed to canvas the possibility for renewable energy sources. Not surprisingly, in 1990, renewable energy accounted for only a small part of energy consumption in Lithuania (around 4 per cent). The World Bank suggested that increasing the share of renewable energy to 10 per cent over the next ten years would be attainable (IC Consult *et al.* 1993:54). Later, in 1996, it was estimated that renewables could make up 15 per cent of Lithuania's energy requirements. This increased estimate is partly because of a decrease in total demand but also from an increase in their use (Lahmeyer International 1996, A-1:16). To be able to use indigenous sources or be able to produce the energy in Lithuania will have economic and environmental advantages in the future. Although unlikely to provide a major percentage of consumption, renewable energy could assist by accommodating lost supply in the case of Ignalina's retirement and reducing the impact of other energy use, leading to a more environmentally sustainable society than possible under the Soviet system.

2.5.2.1 Biogas

Biogas from animal manure, food processing waste, and sewage provides a use for a waste product that would otherwise have disposal problems. The waste that is left after the gas has been extracted can be used as a fertiliser for agriculture, or alternatively, forestry. This in turn would reduce costs normally used on fertilisers (the production of which requires a large amount of energy and causes significant air pollution) and aid the growth of plantations which could be used as firewood - thus providing another indigenous renewable energy source. Most of the potential heat or electricity generated from biogas would be derived from the agricultural sector, with 3 per cent from sewage and 1 per cent from the food processing industry (Lahmeyer International and CowiConsult 1994, 3:5).

Some pilot biogas plants have begun in Lithuania including one at a large piggery where the manure from 500 pigs was used to generate biogas. There are also several family size and community-scale units in operation. Biogas can be used for heating greenhouses or homes and drying crops or timber. It will be most useful from large farms where the heat or electricity generated can be used by the wider community. There is also potential to use chicken manure in a direct combustion process, generating electricity for local use. The largest chicken farms have an estimated 50 000 chickens producing large quantities of manure (IC Consult *et al.* 1993:60). It should be noted that conditions involved with large-scale animal husbandry are in opposition to concern for animal rights and well being, which have become more widely acknowledged around the world, and are generally incompatible with the notion of an environmentally sustainable society.

Biogas from sewage sludge also has some potential and using it to generate electricity would offset the environmental impacts the large quantities of biogas have on the greenhouse effect. The Lithuanian Energy Institute estimate that around 10 million m^3 of biogas is emitted into the atmosphere each year from existing sewage treatment plants. The amount currently biologically treated and therefore having biogas potential is small and could only be a viable energy source once sewerage systems are improved and become more widespread in Lithuania (IC Consult *et al.* 1993:60). Since most municipal and industry sewage is integrated in Lithuania, there could be problems generating gas from the sludge if it contains heavy metals and other chemicals. It would also be inappropriate to use for fertiliser. Municipal waste could also be burned. There is currently a Danish funded feasibility study in progress to ascertain the potential of a 40 MW power plant in Klaipeda. The cost of waste incineration could be offset against land fill costs (IC Consult *et al.* 1993:61).

2.5.2.2 Hydro-electric

There are several other possible sources of renewable energy in Lithuania which could decrease the share of nuclear, oil, and coal in energy production. There is potential for increasing the share of hydro in electricity generation since only 11 per cent of the installed capacity is used (ESD and LEI 1996). Upgrading the existing 12 hydro power plants (and 65 small hydro systems), for example, is a feasible option, though new large scale plants are restricted by geography, financial costs of technology, and environmental concerns.

Only two rivers, the Nemunas and the Neris, would be capable of sustaining 100 MW of generation (Lahmeyer International and CowiConsult 1994, 3:6). These could be supplemented with new micro plants, creating a potential capacity of 17 MW or 0.31 PJ per year (IC Consult *et al.* 1993:54). Gas turbine power plants have also been recommended as an inexpensive nuclear replacement for the post-communist region (Hinrichsen 1992:38)

2.5.2.3 Biomass

The current use of wood as a fuel source is minimal in Lithuania. There is one commercial size wood fuel boiler in operation and small amounts are used in rural areas. The forest industry in Lithuania produces between 1.4 - 4.0 million m^3 and waste reportedly accounts for about 30 per cent of this total. Wood fuel could also be obtained from wood based industries. Sweden has been involved in the development of a plan for wood fuel use in Lithuania but restricted resources have hindered the promotion of wood fuels. Small plantations have since been developed in Lithuania specifically for energy production and the Forestry Ministry recommends such forests be planted in exhausted peat bogs (IC Consult *et al.* 1993:59-60 and ESD and LEI 1996). The Danish Energy Agency has provided funding for a feasibility study and implementation of a plan to convert an existing oil fired district heating plant of 4.5 MW to utilise wood chips and, if necessary, peat. It was intended to be completed by winter 1993 (IC Consult *et al.* 1993:60).

The use of wood burning boiler is restricted by capital costs which are about 2-3 times larger than a gas burner and there would additional costs of emissions control. According to the *National Strategy,* conversion of oil and coal fired boilers is both desirable and feasible especially as fuel prices rise (IC Consult *et al.* 1993:59-60). However, the use of wood and peat could have serious environmental ramifications. Some peat bogs are already exhausted and wetland areas have been substantially eroded and decreased (see Chapter 3). The concept of using waste to generate energy is an important aspect of environmental sustainability, thus, in using wood and peat consideration would have to be given to the degrading effects on the natural environment.

2.5.2.4 Solar

According to Paulius Kavaliauskas, solar energy is "Pie in the Sky" for Lithuania (pers. comm., September 1992). One reason is that the use of

active and passive solar regimes in Lithuania is restricted by the poor insulation of buildings. Therefore, passive solar will only be useful for new buildings and its contribution will depend on the rate of construction of new buildings which is dependant on the general state of the economy. The high cost of active solar is an immediate restriction. Also, since around 70 per cent of buildings in larger towns and 55 per cent of buildings in the country overall are supplied with heating and hot water from a centralised system, active solar will only be economically viable in rural areas not already connected to the district heating system. It could, however, play a role in agriculture by heating greenhouses, drying crops, and milking, for small household hot water systems and for swimming pools at health resorts and the like (IC Consult *et al.* 1993, ESD and LEI 1996).

2.5.2.5 Wind

Danius Lygis (environmental advisor to the Seimas [parliament]), stated that a small wind farm was being developed for the North West (Danius Lygis pers. comm., July 28 1992) but would supply only about 1 per cent of the region's electricity demand (Paulius Kavaliauskas pers. comm., September 1992). The *National Energy Strategy* recognises wind is an effective energy source since large wind turbines of >1 MW on the Baltic coast could generate up to 8.4 PJ per year - the equivalent of one 300 MW unit at the thermal plant at Elektrenai and accounting for 2 per cent of total primary energy consumption. However, there are some environmental problems such as noise and visual pollution and large land use, all in an important recreational area of Lithuania. Analysis, based on 1991 electricity and fuel prices, has shown that wind power costs 8 cents per kWh while electricity from conventional sources costs around 6 cents per kWh. Wind may have a future in Lithuania, nevertheless, if market prices for electricity are achieved and expected decreases in the cost of wind turbines is realised (IC Consult *et al.* 1993:58-9).

2.5.2.6 Geothermal

Geothermal energy seems to be a likely contributor to the Lithuanian energy system and is being seriously considered as an option since there are places with underground water temperatures of 70°C. There is currently a Denmark-supported pilot project of 3.5 MW under development near Klaipeda. So far, the project has met with expectations and the warm water will be used

for heating greenhouses in the area. Further funding will be required to implement plans of another project at Palanga. Although currently restricted by the high capital investment required to get geothermal energy underway, research indicates that it could be a major contributor in Lithuania by the year 2000 (IC Consult *et al.* 1993:59).

Such projects in renewable energy are only in the early development stages and confidence in these options as long term solutions is low. However, if alternative energy was seriously considered, it would be wise for planners and government departments to learn from the experience of the oil terminal proposal. Any alternatives would need to be developed thoroughly before decisions regarding the future use of Ignalina were made. Accusations of 'Soviet-style thinking' and xenophobic attitudes have been levelled at decision-makers and the oil terminal serves as an important case study in highlighting such approaches to decision-making. It demonstrates the interaction between nationalism, interest groups, government, and the process of Sovietisation, in planning a potentially profitable, yet polluting, enterprise.

2.5.3 Conservation and Efficiency

Previous sections have highlighted the inefficiencies in the Lithuanian energy system, a legacy of Soviet energy planning. Improving efficiency and conserving energy offers the best prospects for meeting Lithuania's energy (particularly electricity) requirements. Scott *et al.* (1995:716) found that in the FSU region, particularly when based on low growth scenarios, conservation and energy efficiency would enable the closing of all the RBMKs and some VVERs with a fairly minimal investment. Conserving energy, improving efficiency in energy production and consumption, and reducing negative impacts of energy production on the environment are all referred to in the Lithuanian Law on Energy (Article 3) as aims of energy policy (Supreme Council of Lithuania 1995). The adoption of a Lithuanian National Energy Conservation Programme in 1992, indicating recognition of a problem with energy efficiency, was an important step. It was estimated that the programme could save around 20-25 per cent of various fuels if fully implemented.

Conserving energy and improving efficiency is particularly important in terms of providing alternatives to nuclear generation in Lithuania, as

decommissioning Ignalina requires much of the country's domestic requirements to be met from air polluting thermal power plants using crude oil and gas. Rather than constantly improving safety at Ignalina, directing finance into improved energy efficiency could have positive implications for both the economy and the environment. Californian physicist, Arthur Rosenfeld, has strongly supported such a direction for CEE and FSU, insisting that:

> We applaud the West's growing concern about the nuclear crisis in Central and Eastern Europe, but proposals to spend billions on supply-side fixes are misguided. A less costly approach is to direct investment toward improved energy efficiency, concentrating initially on production and mass distribution of compact fluorescent lamps and other simple technological improvements (cited in Hinrichsen 1992:38)

In order to affect energy use levels in a country, several approaches could be taken. A government could put strict regulations in place, such as compulsory insulation or building requirements or use prices as a mechanism to encourage efficient use or rely on conservation programmes aimed at developing an "efficiency culture". Australian Government policy has been to improve the efficiency of energy use in order to both conserve resources and improve environmental impacts. The approach to energy conservation in Australia over the past 15 years has been non-regulatory. All energy consumers have been encouraged, rather than forced, to adopt cost-effective conservation measures. This encouragement has taken several forms. Energy information centres have been established across the country in larger cities, often linked to government owned electricity or gas utilities (i.e. the centres are largely government funded). They supply energy conservation advice to residential, commercial and industrial consumers. Public education campaigns, urging energy efficiency, have also been funded by government. There have been many such campaigns across the country throughout the 15 year period. Energy efficiency has been taught in schools with some teaching materials prepared and distributed by government. Industries have been encouraged to undergo energy audits through tax concessions and schemes where the government pays for the audit.

Another approach has been to encourage innovation in energy conservation through research and demonstration funding. Many hundreds of research grants to industry, universities, and research organisations were offered and were successful in establishing a diverse and enthusiastic energy research culture in the country. In 1991, the research emphasis changed from a very

broad mix of pure and applied research to a more applied approach, with the expectation that research would be jointly funded by government and industry. Concurrently, small grants were made available to local community groups to promote energy efficiency at a local level.

How successful has this non-regulatory approach been? Primary energy use per person in Australia has continued to grow over this 15 year period, 197 GJ/person in 1975, 211 in 1983, and 228 in 1990. But energy efficiency, measured as a function of GDP, has improved: 23 TJ per million US dollars of GDP in 1975, 17 in 1983 and 15 in 1990. This might be judged as a modest success. Economic output has increased at a greater rate than energy use. But an improvement in per capita energy use should be the goal of any serious energy conservation campaign, suggesting that some regulatory control might also be desirable. This is more so in the Lithuanian situation where energy prices are well below international market prices which is a disincentive for people and industries to improve energy efficiency.

In general, Lithuania has tended to use regulatory policy instruments. This is evident in the direction of a third of available monies from the Environmental Protection Fund toward environmental education and research whereas in Estonia the approach has been to more direct regulation and taxation, relying less on encouragement through education (Eckerberg and Pedersen 1997). There have also been, however, practical attempts to improve efficiency of consumption in the urban sector. Some efforts, such as a pilot project involving constructing of energy efficient apartments in Kaunas, initially suffered from a lack of financial support but have since secured more assistance from Denmark and the World Bank (Dragunevicius 1994). Investment in such measures will have greater economic and environmental returns for Lithuania in the long-term.

2.5.3.1 Price Reform

The average cost of energy to consumers in Lithuania, and indeed the rest of the eastern and central European countries, has been traditionally well below Western Europe. (Hughes 1992:64) Under the Soviet system, there was no guide for market prices and the price of a commodity was rarely related to its actual production cost. For example, 'the state sold oil to its industries for about nine rubles a barrel - less than the price of a liter of vodka' (Peterson 1993:16). This was also the case for water, forests, and other resources, leaving

no incentives to use them wisely. The transition to a market economy should help environmental quality by improving the incentives through

> the elimination of explicit or implicit subsidies for the consumption of energy and other natural resources, thus encouraging energy conservation and the more careful utilization of other resource-based products (Hughes 1992:67).

Such changes would take time but would go far toward improving air quality. A gradual increase in energy prices up to the prevailing prices in Western Europe could reduce the energy intensity of the Central European economies by 30 to 50 per cent by 1995-2000. It will also require stricter environmental controls and the replacement of old technology before substantial improvements in ambient air quality (Hughes 1992:67-71). Hughes points out that it is important that governments do not replace old problems with new ones by establishing new subsidies for energy conservation. He believes that in the end it is energy prices that should govern the actions of industries and other consumers, 'not a panoply of subsides and other conservation policies' (Hughes 1992:73) However, it could be argued that an increase in price, while certainly an incentive to use less (particularly in a struggling economy), may only ensure just that. A reduction in energy use has overall benefits to the economy but not to quality of life - if it is still used in an inefficient way. Therefore, education will be a key factor so that consumers can efficiently use less energy. Consumers that use less energy but wastefully are not getting the full benefit from what they pay for and perhaps will suffer as a result. It is also environmentally better if full benefit is received from extracted resources. Therefore it is essential that energy conservation measures are not restricted to incentives to use less but include education to ensure efficient use.

Electricity prices in Lithuania and other parts of the former Soviet Union have been set well below the cost of generating the power. Thus, there has been a lack of adequate financial resources available for maintenance, improvements, and safety enhancement as well as no incentive for conservation. Price reforms will not only improve conservation but also provide funding for improvements to the nuclear power system and establishing alternatives (in United States Senate Hearing 1992:28&30). The price of electricity in Lithuania increased by 167 times between January 1992 (US 0.03 cents) and July 1995 (US 5 cents)[19]. Whilst this has caused serious

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[19] This is partly due to the relative value of the ruble to the US dollar (120 rubles per USD in

problems for some domestic users, it has been a necessary step toward improving energy efficiency. Improving the efficiency of buildings must also be carried out in order to avoid consumers paying more for electricity they do not need. Further, improving the efficiency in transmission would decrease supply costs, thereby reducing the need to increase consumer prices.

2.5.3.2 Pollution Taxes

An effective structure of environmental incentives and regulations will be needed to ensure that economic recovery coincides with environmental improvements (Hughes 1992:75). Hughes argues that the fines are often too low to act as a serious deterrent while enforcement has been ad hoc. Chapter 6 demonstrates that the pollution charges and fines in Lithuania are not effective as a pollution abatement instrument. While it is desirable that the revenue from such charges are directed to a Environmental Protection Fund, the charges themselves should be directed by the level of damage caused - current or projected (Hughes 1992:74). Such fiscal approaches need to be backed up with regulatory instruments and incentives to conserve energy and reduce pollution rather than providing a license to pollute.

2.5.4 Regional Co-operation

Since regaining independence, Lithuania has been thrust back into the regional and indeed international community. For Lithuania to recover economically, socially, and environmentally, cooperation with the neighbouring countries will be vital. The Baltic Sea Region is a unique area with a variety of cultures and forms of government. It is generally expected that regional cooperation should follow the ending of the Cold War and the emergence of the Baltic States from the forced division of communism (see Fitzmaurice, J., 1992). The problem is, however, that cooperation clashes with the desire for independence that has been deeply instilled by 50 years occupation. The fight for independence has left fear in control of many policy decisions and the idea of forgoing any sovereignty is considered unwise in regaining economic independence. Although some believe that it will take some time before the Baltic States will integrate and cooperate with each other and, to improve the situation, cooperation in the whole region should be encouraged (Gricius 1992:192).

January 1992) and the introduction of the Litas which has been pegged to the US dollar (4:1).

One area that obviously will require cooperation is energy. With few indigenous resources, Lithuania must negotiate with the neighbours. Co-operation is desirable for both economic and environmental reasons. There were some signs of hope when in November 1993, the energy ministers from Lithuania, Latvia, and Estonia agreed to form a working group to examine energy issues with an emphasis on co-ordinated policies (*The Baltic Independent* 4(185), B1; November 1993). However, the apparent breakdown in cooperation (illustrated by the abandoned cooperative oil terminal options at Ventspils or Liepaja), indicates the impact of national sentiment on international relations. The legacy of the Soviet approach to energy planning should be appreciated, in order to understand the problems Lithuania faces in improving energy policy.

2.6 **Conclusion**

Energy production and use in Lithuania is clearly a cause of significant environmental damage. Major improvements in the efficiency of energy use are required if these environmental impacts are to be reduced. While the presence of a 'Chernobyl design' nuclear reactor is a constant, high environmental risk that the environmental movement would like to see removed, the environmental impacts of any nuclear power, RBMK or not, make it an inappropriate energy source from an environmental perspective.

Concern over the safety of the Ignalina nuclear power station may act as a catalyst for international support to improve the energy system and develop renewable energy sources. Already there are a number of nearby countries which are supporting such initiatives. Some energy commentators would argue that the nuclear power plant should be replaced by a new, safer design. An environmental perspective, however suggests that, instead, the nuclear power industry in Lithuania should shut down all together and the large investment that would be required to rebuild the nuclear reactor directed into alternative energy sources and energy conservation.

Nuclear power, excluding exports, accounts for only 8% of total domestic primary energy requirements - an amount that could, feasibly, be made up by an increase in indigenous renewable energy. In terms of electricity production, the available generation capacity of non-nuclear sources is well about that required to meet domestic requirements. Technically it is, therefore, possible for Ignalina to cease operation. But, if desired economic and industrial

growth is to be achieved, the energy system as a whole would have to expand or, alternatively, significant improvements in energy efficiency would have to be realised. Increasing the efficiency of energy production and use is the preferred environmental option. Education programmes, encouragement of local energy research and development initiatives, and public information on conservation options would help to establish a culture of energy efficiency.

However, it seems likely that regulation in the form of more stringent energy standards for new residential and commercial buildings, compulsory retrofitting or upgrading of existing buildings, and minimum energy targets for new and existing industries would be required if the existing energy system in Lithuania is to cope with any growth and improvement in the standard of living. Regulation should accelerate the process to increase energy efficiency and reduce the environmental impacts of its supply yet may prove difficult to implement because of an entrenched scepticism of central control by the Lithuanian people in the transition to a market economy. Therefore, a gradual increase in energy prices will also be required to encourage efficiency as well as compensate the loss of nuclear-generated electricity exports

This chapter has shown the highly political nature of decisions relating to environmental degradation or protection. Decisions regarding the continuance of nuclear power and the construction of the oil terminal were made on the basis of economic arguments - namely that Lithuania cannot be economically independent without them. However, it is clear that these decisions had other important implications for vested interest groups. The Lithuanian governments have not pursued energy policy in the way that would be expected if they were moving toward a society based on environmentally sustainable society. The politicising of decision-making in this sphere has hindered any efforts to do so.

Chapter 3: Water Pollution

3.1 Introduction

Lithuania has abundant water resources and water has always been a part of Lithuanian culture. There are several myths or legends which involve water such as the story of the Princess Jurate which tells of the origins of amber found in the Baltic Sea. Jurate lived under the sea in a huge castle made from amber. The god of thunder, Perkunas, was in love with her but Jurate's affections lay with a mortal fisherman. In his anger, Perkunas destroyed the castle into millions of pieces and these can now be found on the shores of the Baltic Sea. The cultural identification with water, and particularly the Baltic Sea, helps explain the importance of water pollution in Lithuanian society and the way in which people rallied to protect the Baltic Sea (these connections are further discussed in Chapter 4).

A survey conducted in 1992, as part of the research for this thesis, highlighted the importance placed on water pollution in Lithuania, indicating that 74 per cent of Lithuanian students and 62 per cent of Greens regarded water pollution as one of the three major environmental problems in their country.[1] Concern about the quality of water in their own country obviously influenced perceptions of world problems. Of the student respondents, 39.5 per cent noted water pollution as one of the three major environmental problems in the world, while 40.5 per cent of Greens interviewed also mentioned water pollution. Water protection is also a government priority with a large proportion of the domestic and international assistance environmental allocations being directed toward waste water treatment (see 6.2.3.2). It is also identified as a major priority in the National Environment Strategy (see 7.4.2).

Such perceptions have not, however, led to a society conscious of water use. As with energy, Lithuanians use almost double the water per capita than people in other European countries. Water use varies in Lithuania but averages at about 272 litres per capita per day. In contrast, Sweden uses

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[1] 49% of students and 43% of Greens stated air pollution as one of the three major environmental problems and 43% and 35% respectively included Ignalina nuclear power station or other nuclear activity as a third major problem. See appendix for survey questions and comments.

approximately 195, Denmark 175, Norway 167, Finland 150, Spain 131, and Belgium 116 litres per capita per day (Houston and Tunnicliffe 1994:38). Besides the lack of effective meters and tariffs for water use during the Soviet period, there are other reasons for such high use. Industry has been inefficient and has consumed a lot of water in its processes. Also, the plumbing systems in the large apartment buildings encourage high level water use not only due to leaking pipes but also because water can take up to 10 minutes to become hot in some apartments.

There are more than 700 rivers[2] and rivulets in Lithuania and 2830 lakes have an area greater than 0.5 ha. Rivers, lakes, streams, and canals have a total length of 64 000 kilometres. The majority (97 per cent) of the rivers are less than 10 kilometres, while nine rivers are over 200 kilometres long. The Nemunas, Lithuania's longest river (937 km), is a tributary of Lithuania's largest inland water source, Kursiu Lagoon (Environmental Protection Department of Lithuania 1992:65 and Duzinskas and Gutkauskas 1994:79). Around 4.6 billion m^3 of water from various water sources are used annually (1993) in Lithuania of which, around 3 billion is used for cooling the Ignalina NPP (see 2.4.2.2). Of the remainder, approximately 50 per cent is consumed for municipal or domestic purposes, 25 per cent for industry, 25 percent for fish farming, and 2 per cent in agriculture. The total water use has decreased to around half the quantity used in 1989 which has been attributed to economic decline. Along with the decrease in water usage, there was also a reduction in water pollution. In 1989 there was an estimated 500 million m^3 of polluted water which had decreased to 360 million by 1993 (MEP 1995a:37).

Water use and protection in Lithuania have been regulated by the *Water Code* of 1972. The *Law on Taxes on State Natural Resources* of 1991 includes charges for extracting groundwater or using surface water. The Water Code emphasises protecting all water bodies from pollution and aridification (Zilgalvis *et al.* 1993:47-50). It has been criticised by Applegren (1994:20) because of its inconsistencies with the new economic and institutional system. Despite such legal statements as found in the Code, all sources of water have been affected in Lithuania. For example, intensive land reclamation for agriculture and peat extraction has led to the draining of around 80 per cent of the country's wetlands (Duzinskas and Gutkauskas 1994:79). Wetlands

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2. According to Applegren (1994:5), there are 29 000 rivers in Lithuania, suggesting a somewhat larger grouping that would include streams and creeks.

provide important habitat for an array of wildlife and play an important role as nutrient sinks in the landscape, acting as a buffer to pollution before it reaches the Baltic Sea, for example. They can also be used for nutrient reduction in waste water. The most seriously threatened wetlands are the natural peat bogs. Although peat extraction has lessened during the recessive economic climate, the Government plans to increase extraction from 150 000 to 2 million tons, including the exploitation of 73 previously undisturbed bogs (Lithuanian Fund for Nature 1995:1-2). The management of coastal lagoons and wetlands is a component of the Baltic Sea Joint Action Programme (Kindler and Lintner 1993:13).

Groundwater, the primary source of drinking water in Lithuania, has also been affected by agricultural activity including run-off from large cattle farms and piggeries and poor storage of fertilisers and pesticides, leaving 51 per cent of shaft wells below hygienic requirements (Environmental Protection Department of Lithuania 1992:67, Juodkazis 1994:65). Old landfills, industrial contaminated sites, oil storage tanks, mining areas, and former Soviet military sites also pose serious threats to groundwater quality (US EPA 1995:3, Juodkazis 1994:65). The shallow groundwater contains 'large amounts of organic substances, oil products, nitrates, nitrites, ammonia, pesticides, detergents, and other pollutants' (Environmental Protection Department of Lithuania 1992:67). The concentration of nitrates in the ground water of about one third of the country is above the Maximum Allowable Concentration (MEP 1995a:52).

High iron and fluorine content is also a problem with around 60-70 per cent of wells supplying water with an iron content 3-4 times higher than the maximum concentration established by World Health Organisation (WHO). In rural areas, the iron content is removed from only 2.5 per cent of reservoirs. This is significant in light of the fact that around 700 000 people obtain water from the 14 000 wells located in Lithuania (Duzinskas and Gutkauskas 1994:80). Effects of heavy metals in the ground water are not significant but are generally higher at local pollution sources. Increased concentrations of cadmium and aluminium are evident as a result of acid rain (MEP 1995a:53).

Surface water is also polluted. Organic substances in 70 per cent of rivers accounts for 2.0-4.0 mgO_2/L while the amount in 20 per cent accounts for 4.0-6.0 mgO_2/L. (BOD) According to preliminary calculations, surface water receives 40 per cent of the total pollutants from non-point sources

(Environmental Protection Department of Lithuania 1992:68-71). The discharge of waste water from households and industry is a significant contributor to surface water pollution. One strategy planned to reduce the input from households and industries is a water tax which should encourage people to use less water. A shortage of water meters remains a problem (Environmental Protection Department of Lithuania, 1992:71 & 128). As section 3.4 discusses, sewage treatment is a priority of the Lithuanian government. In rural areas, only one in nine settlements have sewage treatment facilities, most of which require substantial reconstruction, repair, or modification. Given that around 60 per cent of groundwater sources are hydraulically connected to rivers, the discharged waste water into rivers ultimately infects those groundwater sources (Duzinskas and Gutkauskas 1994:80-1). Since the groundwater is essentially unconfined, contamination in one area can spread to another area (Juodkazis and Klimas 1997:36).

The issue of water treatment in Lithuania is not only about waste water. Due to the above mentioned problems in the quality of groundwater, there is now an overdue need for pre-treatment facilities to reduce harmful pollutants (such as iron, manganese, and organic compounds), thereby significantly increasing the costs of water supply and treatment. Providing high quality drinking water to the rural population, for example, has an estimated cost of USD 500 million (Juodkazis and Klimas 1997:37). Beside the need to provide clean water to satisfy Lithuanians requirements, it is also an input in the food industry and necessary for the development of Western tourism both of which have economic benefits for the country (Juodkazis 1994:70).

The US Environmental Protection Agency (1995:3-4) recommends that, by the end of 1997, Lithuania has in place an effective monitoring system which will be essential for priority setting. This requires modern sampling and analysis equipment and the harmonisation of collection and analytical protocols in line with international monitoring standards. It will also require new computer hardware and software, adequate training, and a reliable supply replacement parts. There are, of course, economic obstacles to the purchasing of such expensive equipment as well as issues affecting implementation such as corruption, inadequate infrastructure, and a lag in legal reform (see Chapter 7). In 1992, the goal of the Environmental Protection Department (1992:129) was to 'successfully establish the water quality and sewage water discharge standards of the EEC.' However, the Department recognised that

the implementation of such standards would be determined by the economic situation and the possibility of obtaining environmentally sound technology (see also 5.4.4). International assistance, particularly in technology transfer of equipment, will be an important aspect of improving water quality in Lithuania (see 6.2.4.2).

3.2 The Baltic Sea

Of major concern to Lithuania, and indeed the rest of the Baltic region, is the condition of the Baltic Sea. Interestingly, 21 per cent of student respondents and 11 per cent of Greens in the survey specifically mentioned the Baltic Sea as one of the three major problems in Lithuania. The Baltic Sea is a unique ecosystem which has been degraded by the increased industrialisation on its shores in the last 80 years. But as late as 1960, the Baltic Sea was still regarded as "healthy", characterised by high water transparency (Kindler and Lintner 1993:7 and Zmudzinski 1989:47).

Scientific knowledge has grown significantly during the last few decades as concerted cooperative efforts have been made to prevent further environmental deterioration in the Sea (Dybern 1989:89). As a result, it is now among the most well known salt water bodies in the world (Zmudzinski 1989:46) yet pollution has continued to threaten its environmental integrity. As is demonstrated below, the unusual features of the sea have compounded pollution since it has not been able to cope with increasing loads.

The Baltic coast has a length of 7000 kilometres (Ferm 1991:533) and includes Sweden, Finland, Estonia, Latvia, Lithuania, Denmark, Germany, Poland, and Russia (Kaliningrad and St. Petersberg districts), with Norway, Byelorussia, Czech Republic, Slovakia, and Ukraine within the catchment area (see Figure 1.1). Transboundary pollution in the Baltic Sea, irrespective of its source, will need cooperation between the countries in the area. Each has a different impact on the environment and, due to the varying economic conditions, each has an individual capacity to implement measures to improve environmental conditions. This includes the priority given to environmental issues by each country.

With the secession of the Baltic republics from the former USSR, more emphasis could be placed on interaction in the Baltic region. Relations between the USSR and communist Poland on the one hand and other Baltic

countries (such as Finland, Denmark, and Sweden) on the other, were not amenable to cooperation on issues such as Baltic Sea pollution, particularly since the impact of the communist countries was probably greatest. For Eastern Europe, the cleaning up is costly and requires sophisticated technologies which are not available (Fitzmaurice, M. 1992:xxvi). There has been some funding from the Western countries in the region since an investment in the cleanup of Lithuanian rivers, for example, will also bring beneficial returns to their coastal waters (see 6.2 and 6.2.2.1).

3.2.1 History of Relations in the Baltic Sea

Few attempts have been made to produce a comprehensive history of the Baltic region as historians have tended to write along nationalistic lines as well as generally focusing on land-based history (Runblom *et al.* 1992:5). The people living around the Baltic Sea have depended on its waters for transport and food since populations first settled in the area (Andréasson-Gren *et al.* 1992:4). The Hanseatic League was a medieval trading organisation with headquarters in German cities. The Baltic states' capitals also traded with these cities and later offices were opened in Riga and Kaunas. Danzig (Gdansk), the best known Hansa city, imported timber and raw materials from Lithuania. These were inexpensive and the middlemen[3] made large profits. The forests along the Nemunas river were heavily exploited because of their easy transportation from site. Trade with Danzig continued into the mid sixteenth century and the timber exports were massive (*Lietuvu Enciklopedija* 1956, vol.8:129-30).

The Baltic Sea has been the focus of several wars in the region. The period between 1560 and 1720 was characterised by shifting coalitions in the rivalry for the Baltic commercial cities. What were once analysed as struggles against various threats - protecting one's territory sometimes required offensive action - are now generally seen as a power game 'to gain control over the Baltic Sea, its trade routes, its inlets and outlets, and the narrow passages' (Runblom *et al.* 1992:24). The Baltic Sea, straddling East and West, still has strategic relevance and armed forces have been deployed accordingly (Westing 1989a:4).

'The New Hansa' is a label that has developed to describe the supposed new

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[3] Gender bias intended.

cooperation across the Baltic. However, some believe it is inappropriate since the Hanseatic League was an unequal partnership with the northern Baltic coastline countries more dependent on the German cities (Runblom *et al*. 1992:5-6). It is also clear that despite established trade, cooperation did not really exist and relations centred around a power struggle right into the twentieth century.

Although the long history of trade had an impact on the environment (e.g. Lithuanian forests), the use of the Baltic Sea did not have a significant negative impact until the twentieth century. Populations of societies on its shores have grown and technologies have changed dramatically and put a strain on the sea. Since 1950, the nitrogen load has doubled and the amount of phosphorous entering the Sea has increased by four times (Ferm 1991:536). In addition, there has been chemical, oil, and heavy metal pollution. This burden has been buttressed by the lack any costs for its use and for any negative impact that activities have had on the sea. Economically, a zero price is justified only if there is a surplus of the services (Andréasson-Gren *et al*. 1992:4). That is to say, no resource or service should be free unless supply far out weighs its use. In the case of the Baltic sea, it is now apparent that the sea has a limited capacity to supply the countries with the services they make use of, therefore, the impact is not environmentally or economically justified. Finance for its clean-up, and protection (perhaps in the form of a 'polluter pays' tax) will need to come from all the countries on its shores. Problems arise with this due to its unequal use and unequal impact.

3.2.2 Ecological Situation in the Baltic Sea

The Baltic Sea, a remnant of a region that emerged during the Ice Age about 10 000 years ago, is the largest body of brackish water in the world (around 400 000 km^2). It is a non-tidal, epicontinental[4] sea, a distinction it shares with the Persian Gulf, the North Sea, and Hudson Bay. Epicontinental seas are all shallow; around 100 m deep as compared to seas between continents which are usually about 2000 m deep (Håkanson 1992:5). Although a relatively young sea, a unique ecosystem has developed due to its shallow and brackish waters (Fitzmaurice 1992:1), including an unusual combination of fish

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4. "Epicontinental" means that the sea is situated *on* the continent rather than between continents thus accounting for its shallow waters (Håkanson 1991:5).

species[5]. Brackish waters are unusual and few species have adapted to their conditions, particularly at low temperatures which allows only a short reproductive season. Since only a small number of species are able to cope with these conditions, food chains are extra sensitive to disturbance (Håkanson, 1992:5 and Lothigius 1991a:3).

The few species living in the Baltic Sea have a good food supply and therefore populations are generally healthy. However, it is heavily polluted and is particularly sensitive because of the cold climate and the restricted water exchange with the ocean (Håkanson 1992:5). The northern part is covered with ice for up to five months of the year and the cold, stagnant areas act as traps for organic matter (Ferm 1991:533). The main source of oxygen replenishment is the opening to the North Sea. This is very narrow and only 18 metres deep, thus salt water inflows need to be strong in order to penetrate and renew the deeper waters of the Baltic Sea Proper where permanent stratification hampers the exchange of oxygen (Helsinki Commission 1993b, Ch.2:1 and Kindler and Lintner 1993:8). In other words, pollution is also aggravated by the difference between the density of the surface water and the saltier deep water, preventing adequate mixing and leading to an irregular exchange of oxygen (Fitzmaurice, M. 1992:3).

It takes between 25 and 50 years for all the water in this semi-enclosed system to be renewed which enables stable compounds to persist and actually increase their concentration, as dilution is very slow (Lothigius, 1991a:4). The resulting stagnation is currently the worst on record in the Eastern Gotland Basin (Helsinki Commission Secretariat 1992, Ch. 2:4). The overall low salinity level of the Baltic Sea[6] also adds to the species' sensitivity to pollution because the pollutants interfere with an ecosystem that is already under stress due to its adaption to the lower salinity. The continuously decreasing salt concentrations, or the salt gradient, is the main reason for the lack of life forms as compared to other marine systems (Kautsky 1992:6, 32). The sea can be divided into four 'functional' zones which are affected in different ways as described by Håkanson (1992).

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5. Cod and Herring cohabit with freshwater Pike and Perch (Fitzmaurice, M. 1992:4).

6. The salinity level in the Baltic Sea Proper is 5 per mille and 4 per mille in the Bothnian Bay. It varies greatly in the Kattegat area; between 15 and 30 per mille. Oceans generally have a stable salt content of about 35 per mille (Kautsky 1991:6).

1. *The drainage or catchment area* is over 1 700 000 km^2 which is more than four times the total water area. It is densely populated [about 16 million people on the coast and 80 million in the catchment (Helsinki Commission 1992, Ch. 2:1)] and heavily industrialised. Rainfall in this area enters the sea via the network of streams and rivers bringing with it various pollutants.

2. *The coastal zone* picks up pollutants from land-based activities. It becomes a "purification plant" for open waters. 'The natural processes (water transport, flux of material, and energy and bioproduction) in this zone are of utmost importance for the entire sea.' (Håkanson 1992:8)

3. *The transition zone* is located between the coast and deeper waters. There has been comparatively little studied about this zone but its condition is probably of paramount importance for the ecological status of the Baltic Sea.

4. *The deep water zone* is the area beneath the wave base. It is the end point for many pollutants and therefore the areas where anaerobic conditions are likely to occur (Håkanson 1992:7-8). Some areas of the bottom of the Baltic Sea Proper and the Gulf of Finland are actually devoid of life (Fitzmaurice, M. 1992:4) due to oxygen deficiency and the subsequent presence of hydrogen sulphide (Sukyte *et al.* 1994:137).

The Baltic region represents a unique example of an eco-geographical unit. Pessimistic forecasts predict a disaster in the sea by the end of this century, while more optimistic accounts suggest it might be after thirty years (Fitzmaurice, M. 1992:33). Current trends indicate increasing salinity, nutrient levels and concentrations of toxic substances in conjunction with decreasing oxygen levels (Zmudzinski 1989:48-50). If environmental conditions are to be improved in the Baltic Sea, it must be done in a coordinated manner with the inclusion of all countries in the catchment area (Håkanson 1992:5).

3.2.2.1 Kursiu Lagoon

The Nemunas river, which flows right through the territory of Lithuania, is a tributary of the Kursiu Lagoon. Part of the lagoon area is under the control of Russian Federation while Lithuania's territory covers 413 km^2. The lagoon

has an area of 1 584 km^2 yet water from a river basin of over 100 000 km^2 flows into it. The river has both economic and recreational significance, particularly as a major fishing resource. The lagoon is separated from the Baltic sea by a sand dune spit, leaving only a narrow opening, however, the combined effect of its shallow depth and the strong influence of wind and waves creates relatively effective mixing of its water mass. Despite high BOD concentrations, this mixing usually prevents anaerobic conditions during most of the year (MEP 1995a:46 and K-Konsult and Krüger Consult 1992:55). The lagoon is usually iced over in January (MEP 1996:1).

Approximately 85 per cent of Lithuania's Kursiu Lagoon is now considered to be heavily polluted with mercury, phenols, DDT, nitrogen, and phosphorous. Swimming in the lagoon is considered a health risk and has, therefore, been prohibited. Pollution has been caused by various activities in Lithuania, Kaliningrad, and Byelorussia primarily being transported by rivers but also the settling of air pollutants. Much of the pollution is carried by the Nemunas which gathers water from an area of 98 200 km^2 (Environmental Protection Department of Lithuania 1992:65-70, MEP 1995a:46, and Antanyniene *et al.* 1994:73). In 1992, rivers carried around 26 000 tons of nitrogen and 1 500 tons of phosphorous into the lagoon which was much less than the average amounts of the 1985-1992 period: 46 500 tons of nitrogen and 2 700 tons of phosphorous (MEP 1995a:48). The southern part of the lagoon is most affected. Here, oligochaete worms predominate which are typical indicators of organic enrichment and heavily polluted conditions. Crustacea, mussels, and snails (important components of fish diets) are now virtually absent from the southern parts (K-Konsult and Krüger Consult 1992:56).

The Kursiu Lagoon was once a leading fish resource not only for Lithuania but the whole USSR. There are around 50 species of fish living permanently in the lagoon and 20 of these are caught in commercial fishing. Sturgeon and Salmon have disappeared while numbers of pike-perch, which favour eutrophic conditions, have increased (K-Konsult and Krüger Consult 1992:56-7). Oxygen deficiency in the deeper parts of the lagoon at certain times (especially in summer) has led to the deaths of large numbers of fish. Blue-green algae predominate in summer and autumn, making up between 58 and 98 per cent of the total amount of phytoplankton (MEP 1995a:48-9, K-Konsult and Krüger Consult 1992:55).

Siltation in the lagoon has led to an increased delta where vegetation has subsequently encroached into fish spawning and feeding grounds. The siltation also impinges on the habitat of other aquatic fauna such as molluscs. Mussel shells used to line the bottom of the lagoon but are now replaced by sand and mud. While there is little information regarding the heavy metal content of sediment, there is an increasing trend for mercury contamination (a waste product of the pulp and paper industry) (MEP 1995a:48-9, K-Konsult and Krüger Consult 1992:55, and Ferm 1991:534). The amount of bacterial flora, used as an indicator of pollution, has been found to be 250 times greater in such sediments than in the water. The concentration of bacterial flora has also been used to highlight the polluted zones of industrial and municipal waste water outlets (Antanyniene *et al.* 1994:80).

The Kursiu Lagoon is the end point for the waste water of around 5 million people living within the catchment as well as the various industries (MEP 1995a:47). The quality of this water is dependent on the effectiveness of treatment plants. There are a number of major centres with inadequate treatment facilities, in particular the city of Kaunas which is situated on the Nemunas (see 3.4). As well as the aforementioned organic pollution which stems from domestic waste water, it has been found that industrial waste water discharged into the Nemunas and Kursiu Lagoon has led to abnormalities in the liver tissue of roach and bream including cancerous tumours in carp (Bukelskis and Serelyte 1994:103).

The decreased use of fertilisers (see 3.2.2.2) has led to some improvements in the water quality of the lagoon, however, the pollution load through the Klaipeda straits has not lessened despite the closure of major pollution sources such as the pulp and paper mill in Klaipeda (MEP 1995a:50).

There are internationally funded programmes on monitoring and improving water quality in the Kursiu Lagoon which include cooperative projects between scientists from Lithuania and Kaliningrad. Such cooperation is crucial but, like all forms of international relations, is fraught with difficulties (see 3.2.3.6 and 7.3.2).

3.2.2.2 Causes and Effects of Pollution in the Baltic

The Baltic Sea can be divided into 11 areas which are affected by the land-based activities of the countries in those particular areas. Land-based pollution is

the most significant source of environmental problems in the Baltic Sea and urban areas contribute around 25 percent of those land based sources of nutrient inputs (Fitzmaurice, M. 1992:32 and Ferm 1991:533). For the purposes of this thesis, the focus is on the region affected most by the activities of Lithuania. The Eastern Gotland Basin, which includes the Gdansk Basin, extends from the Nemunas river basin in the east to the Vistula river basin in the west. It is the most international part of the sea catchment with seven countries impacting on its quality. About 90 per cent of this region are drainage areas of the Nemunas (98 200 km^2) and the Vistula (194 700 km^2) (Helsinki Commission 1992, Ch. 3:11).

Three cities, Vilnius, Kaunas, and Klaipeda, discharge 80 per cent of the total municipal waste in Lithuania. Both Vilnius and Klaipeda have mechanical sewage treatment only, while Kaunas has no treatment facilities despite having a population of around 500 000 and being situated on the Nemunas river (see 3.4). Industrial waste is also discharged into this municipal system leading to high contamination with heavy metals.[7] Some of this is disposed of in landfills but this impacts on the groundwater system (Helsinki Commission 1992, Ch. 3:12). Amongst recreational areas, concentrations of nitrates and phosphates were highest near the sewage outfall of Butinge (MEP 1996:13, 17). There are several industries located on the Nemunas which discharge effluent into the river. There are food processing plants, textile and tannery industries, oil refineries, chemical plants, and pulp and paper mills (the two largest being in the Kaliningrad part of the catchment area). A high load of nutrients from these industries are discharged but initiatives to reduce these have so far been missing (Helsinki Commission 1992, Ch. 3:13). Since many of these industries are old, the possibilities for reducing pollution by internal measures are quite limited (Helsinki Commission 1992, Ch. 3:13). A pre-feasibility study of the Nemunas River basin for the Kaunas waste water treatment plant was funded by Danish and Swedish organisations under the Baltic Sea Environment Program (see 3.4.1.1).

Due to such impacts from Lithuania, as well as similar impacts from other countries in the region, there is continuing concern about eutrophication[8],

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7. Heavy metals are listed in Annex II of the Helsinki Convention under 'Noxious Substances and Materials'. The Contracting Parties are required to 'endeavour to use best practicable means to prevent harmful substances and materials from being introduced..into the Baltic Sea.' (Helsinki Convention, Annex II in Fitzmaurice, M. 1992:244).

8. Eutrophication occurs when there is an over-enrichment of nutrients due to large increases of

and discharges of long living organic pollutants, mainly chlorinated compounds. Therefore, agriculture, the pulp and paper industries, and municipal sewage works have been identified as the major causes of Baltic Sea pollution and should be subject to more specific restrictions (Arby 1990a:10). The first-world countries in the region have significantly reduced municipal and industrial pollution loads on the Sea in the last decade while legislation has reduced the use of hazardous compounds. Impacts have, rather, come from the discharged waste of the pulp and paper industry[9] and intensive agricultural practices. But in the former communist states the impacts have come primarily from inadequately treated domestic and industrial effluent (Kindler and Lintner 1993:8-9). The increase in nutrients since the war has left one third of the sea-bed lifeless (Arby 1990b:12). Inadequately treated municipal sewage not only adds to problems of eutrophication but high levels of faecal coliforms pose serious threats to human health as well as impacting on the economy through lost tourism. Around the town of Jurmala in the Gulf of Riga, for example, high levels of human faecal bacteria and pharmaceutical waste from the city of Olaine have led to annual warnings to people wishing to bathe in the Baltic Sea (Morris 1992:6).

Other industries have made contributions to the load of chlorinated compounds. One surprising source is the chlorination of drinking water, a public health policy, leading to inputs of chloroform and trihalomethanes (Ennell *et al.* 1991:13). The Korsnäs pulp mill in Sweden stopped using chlorine gas in its bleaching process in 1991 at a cost of 2 billion Kronor (approx. USD 400 million) (Granvik 1991:16), a price out of reach for the old Sulphite mills of Eastern Europe. Dioxins[10] have been found in sediment samples wherever taken in the Baltic Sea. Pulp and paper mills are one identifiable source but in 1985, waste incineration was identified as the largest source of dioxins in Sweden. With the introduction of flue gas cleaning equipment, emissions now approach the target reduction of x25 in Sweden (Lothigius 1991c:21). Mining and metal (steel, iron, copper, zinc, and silver)

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nitrogen and phosphorous. This results in oxygen depletion affecting the survival of many species.

9. The countries in the drainage basin produce about 25 per cent of the world production of pulp, paper, and cardboard (Ferm 1991:534). Most of the plants (93 per cent) are located in Sweden (PHARE and FENVIRON 1994:11).

10. Dioxin is a collective name for 75 different polychlorinated dibenzo-p-dioxins and 135 different polychlorinated dibenzofurans. These include some of the most toxic substances known (Lothigius 1991c:21).

manufacturing, primarily in Sweden, Finland, and Poland has also impacted on the Baltic Sea (Ferm 1991:534).

Agriculture has been a major non-point source of pollution in the Nemunas and therefore the Baltic. Mineral fertilisers and pesticides have been used, on a per hectare basis, in comparable quantities to Denmark (excepting Phosphorous which is much higher) but the area on which they are applied is much larger (K-Konsult and Krüger Consult 1992:36-8). The most serious problem related to fertilisers and pesticides in Lithuania is inadequate storage, with average losses at 25-30 per cent of active substances. In addition, the machines are inefficient and consequently, fertiliser is spread unevenly and leaching (of nitrogen) is high. There is also leakage from liquid manure storage (Helsinki Commission 1992, Ch. 3:14-15). Around 90 per cent of the phophorous loads entering the Baltic Sea is derived from land-based activity such as agriculture (PHARE and FENVIRON 1994:11).

The fertiliser plant near Kaunas is also a major contributor to atmospheric pollution which impacts on the Nemunas and the Baltic Sea in the form of acid rain. The economic conditions in Lithuania have led to a decrease in the consumption of fertiliser and pesticides. Since 1991, there has been a tenfold increase in the price of fertilisers and a sixfold increase in pesticide prices and farmers can no longer afford to use large amounts. However, once prices adjust, consumption is likely to increase again (World Bank 1993a:268) (see also 5.4.3 and 7.4.1.4).

Oil pollution continues to be a problem in the Baltic Sea as a result of spills from tankers, such as *Globe Assimi* in 1980, as well as usual leakage from transport, and unloading and refuelling with oil products. There is also a contribution from urban run-off and contamination from former military sites which finds it way into the Sea via the network of rivers in the catchment. As Ferm (1991:536) notes, a further threat to the marine environment may be posed by proposed off shore extraction. As noted in Chapter 2, the recent construction of several oil terminals on the Baltic coast, often undertaken without EIAs, significantly increases the risk of further oil-related pollution.

The victims of the unhealthy environment in the Baltic Sea are numerous. The Grey Seal population of the Baltic Sea has suffered greatly, particularly

due to the presence of PCBs (polychlorinated biphenyls).[11] These were found to be present in fish and seabirds throughout Sweden in 1966 by chemist, Sören Jensen. This discovery was to be a watershed for perceptions of pollution. Although PCBs were never intended to be used in the environment, at the time of the discovery of their impact, they were a firm part of technology throughout the world. The PCB poisoning of Baltic seals was clear twenty years ago, but only now have scientists begun to understand which individual PCBs are the problem (Lothigius 1991a:3). The persistent PCBs have had a greater effect on the seals than the fish.

> The high levels of PCBs in the Baltic Sea fish result in even higher concentrations in the fish-eating seals...and this is the main explanation for the wretched state of the seals' health. (Lothigius 1991b:6)

The otter, another victim, has already become extinct in the Baltic. Despite some promising work by scientists regarding the Grey Seals, after twenty years of suspicion of PCBs as the main threat to them, it is too early to assume that things are changing for the better (Mats Olsson, Swedish scientist in Lothigius 1991b:7). The PCB issue demonstrates how long it can take to overcome problems even when the cause has been identified. To protect the seals from the fate of the otters it is necessary to understand the mechanisms of PCBs in order to stop their spread and to be able to deal with any new toxic pollutant threats that emerge (Lothigius 1991b:7). There has been a lot of attention on PCBs, dioxins, and DDT and their environmental effects. Yet there are about ten million described organic substances and between 50 000 and 100 000 different chemical compounds in general use around the world, most of which are organic substances. There are then a great many substances in use, the effects of which are not yet known; new substances are discovered in the environment more quickly than proven hazardous ones can be removed (Ferm 1991:537).

3.2.3 Cooperation in Managing and Protecting the Baltic Sea

Aims for regional cooperation are set out in the 'Law of the Sea Act 1982' (LOS), but in order to fulfil these, the assertion of national interests has to be overcome and a regional spirit for the benefit of the common should be

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[11] PCBs are listed in Annex I of the Helsinki Convention under 'Hazardous Substances'. The Convention requires that protection from these substances can involve the use of appropriate technical means, prohibitions, and the regulation of trade, handling, and application of products containing such substances (Helsinki Convention, Annex I, in Fitzmaurice, M. 1992:244).

promoted (Fitzmaurice, M. 1992:xxix). Article 123 of the LOS convention, refers to legal obligations of countries bordering enclosed or semi-enclosed seas to co-operate and what the scope of this cooperation should be. There have been different interpretations of this Article, however Malgosia Fitzmaurice seems to support the opinion of Symonides who points to a duty to co-operate. Fitzmaurice poses the question; 'What is the scope of this principle of cooperation?' Firstly, states have to co-operate in good faith, i.e. with the intention to reach an agreement. He goes on to say that 'all activities detrimental to other states should be banned' (Fitzmaurice, M. 1992:13-4).

This demonstrates the interdependence between coastal states which is particularly important in enclosed or semi-enclosed seas. Environmentally unsound activities in one country can influence the state of the environment in other countries. Cooperation, particularly that generated through the Helsinki Commission has led to some improvements. It was announced at a HELCOM meeting in October, 1995 that some aspects of the Baltic Sea environment were improving but that it was still too early to be conclusive (*ELTA* October 21, 1995). Improvements had been noted earlier in 1990 such as decreased DDT levels in fish and birds, decreased oil pollution, and heavy metal concentrations. However, decreases in PCB levels have only been noticed in a few localities (Zmudzinski 1990:51). Environmental cooperation in the region has the further advantage of improving trust amongst the countries in the catchment which has significant implications for political security (Broms 1989:69) (see also 6.2.4.3).

3.2.3.1 Tragedy of the Commons

First accounts of the poor condition of the sea appeared 30 years ago and the quality of its waters has deteriorated since (Andréasson-Gren *et al.* 1992:4). One reason why the situation has been made worse rather than improved since its condition became known has to do with "tragedy of the commons" (a term first coined by Garret Hardin). The Baltic Sea is the common property of those on its shores in a legal sense and of the world in a moral sense. Andréasson-Gren *et al.* (1992) provide an example. Economists point out that an environmental good that is considered to be common property, is not allocated by the free market in an efficient way. If no action is taken, this leads to over-exploitation because no economic incentives to take action exist. If an individual fisher, for example, takes action to protect fish stocks,

resulting in temporary profit loss, in order to preserve future profits, several other fishers would benefit from the action thereby reducing the economic benefit to the first fisher. If, however, they all co-operated, sharing both costs and benefits, they could continue to fish the area with a profit. The authors conclude that a free market will never lead to improvement in the sea which will only be obtained through co-operative management by Baltic countries (Andréasson-Gren *et al.* 1992:4) (see also 5.1, 5.4.2 and 7.3.2).

Fishers would not be the only beneficiaries of improvements in environmental conditions in the Baltic Sea. Firstly, there is the flora and fauna that lives in the sea or relies on the sea such as coastal birds. There would also be great benefits to those people and their descendents who live in bordering countries by preserving the sea for future recreation. Also, since land-based pursuits, such as agriculture and other industries, are the principal source of pollution (in the form of nutrients) in the Baltic Sea (Helsinki Commission 1992:24), these activities may be restricted as a measure to protect the sea, thus further protecting soil, vegetation, and air in the region. The implementation of such restrictions is perhaps the most important step in the process (see also Chapter 7).

The *Law on Environmental Protection of the Republic of Lithuania* (Ch. VIII, Articles 35.1 & 36.1) states that Lithuania,

> shall conclude international agreements on issues concerning environmental protection, and shall participate in the activities of international environmental protection organizations....The laws of the Republic of Lithuania must comply with international agreements, ratified by Lithuania, on issues concerning environmental protection and universally recognised norms of environmental protection (Supreme Council of Lithuania 1992).

An overview of the important international agreements pertaining to the Baltic Sea to which Lithuania is a signatory would be useful in assessing Lithuania's role in protection of the sea.

3.2.3.2 The Helsinki Convention

The Convention on the Protection of the Marine Environment of the Baltic Sea Area (the Helsinki or Baltic Convention) was ratified in Helsinki, 1974.[12]

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[12] The Convention was signed by Denmark, Finland, German Democratic Republic, Federal Republic of Germany, Poland, Sweden, and the Soviet Union (Bergström 1992:21)

Although not the first convention, it was important because it was regional and included several types of pollution. It mainly concerned land-based pollution, dumping, clean-up and assessment of the environment. The collaboration between East and West was unusual at the time (Bergström 1992:21).

The Convention officially went into force in May, 1980 under the steering of the Baltic Marine Environment Commission - the Helsinki Commission (HELCOM). The Commission is inter-governmental and representatives (appointed by the governments) are usually drawn from environmental departments or agencies. There is a Secretariat (consisting of branch, environment, and Task Force secretaries) as well as other committees for specific problems (Bergström 1992:21).

Fundamental to the Convention is international cooperation. It states that protection of the Sea cannot take place by national efforts alone but that 'close regional cooperation and other appropriate international measures aiming at fulfilling these tasks are urgently needed' (in Broms 1989:63). A revision of the agreement was initiated in April, 1992. The new Convention covers all the water in the Baltic Sea, including internal waters. Russia, Lithuania, and Estonia became new signatories.[13] The revised version is more strict in that it requires that:

> best-available technology shall be used, and that the Contracting Parties shall apply the precautionary principle, i.e. to take preventive measures when there is reason to assume that substances or energy introduced, directly or indirectly, into the marine environment may create hazards to human health, harm living resources and marine ecosystems, damage amenities or interfere with other legitimate uses of the sea even when there is no conclusive evidence of a causal relationship between inputs and their alleged effects (Bergström 1992:23) (see also 7.3.2.1).

It also requires the Contracting Parties to apply the 'polluter pays' principle and strict requirements regarding monitoring for ascertaining the implementation of the Convention. According to Andréasson-Gren (1992:6), one failing of the Helsinki Convention is its insufficient regulation of land-based sources of pollution. For example, the agricultural sector, recognised as a major polluter, is not regulated at all. However, one might argue that

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13. At the time of publication of the information at hand, Latvia had not signed but was expected to do so in the near future. Byelorussia, Ukraine, and Czech and Slovak Republics, although situated in the drainage area, were not preparing to sign.

the April 1992 revision, although not specifying agriculture in particular, could be used to regulate the introduction of pollutants via agricultural practices. Despite improvements to the Convention, the most important task is to co-ordinate with all the countries in the catchment area (see also 7.3.2.1).

3.2.3.3 The Gdansk Convention

The Gdansk convention was ratified in 1973 and set up the Baltic Sea Fisheries Commission. While the Helsinki Convention covers all waters, including internal waters, the Gdansk Convention is concerned only with the actual Sea. It aims to ensure conservation and the optimum utilisation of living resources (Fitzmaurice, M. 1992:21). In such a way, the Convention aims to protect the economic interests of using the sea by maintaining habitat conditions for fish. The Commission provides a permanent system of surveillance for those resources but it does not have the power to impose sanctions thus limiting its effectiveness. Protection relies, perhaps too heavily, on the close cooperation of the contracting parties (Broms 1989:63).

3.2.3.4 The Baltic Sea Declaration

The Baltic Sea Declaration was adopted by Prime Ministers and political representatives at the Ronneby Conference, Sweden, 1990. Representatives from the Baltic Sea States, Norway, Czech and Slovak Federal Republic and the Commission of the European Community signed the declaration. The representatives declared, in nineteen paragraphs, their determination to assure the restoration of the Baltic Sea, enabling self-restoration and the preservation of its ecological balance (Bergström 1992:23).

The major requirements set out in the Declaration were: the reduction of harmful emissions by 50 per cent by 1995; usage of best available technology in building sewage treatment plants; the reduction of air emissions from cars, ships, and industry; the intensification of cooperation; the application of the precautionary principle; the development a nature conservation programme; cooperation in improving legal instruments and technical regulations; the preparation of a joint initiative to gain world-wide support for new restrictions on tankers to reduce oil spills; the intensification of cooperation regarding airborne surveillance; and the encouragement of further multi and bilateral commercial and financial cooperation (Bergström

1992:23).

Cooperation, then, plays a pivotal role in implementing such decisions and ensuring that each country takes responsibility for the restoration of the Baltic Sea. The Declaration:

> Welcome[s] the new climate of understanding and cooperation between the States in the Baltic sea area, which will make resources available for the protection of the Baltic Sea environment, inter alia, through the reduced need for armaments expenditures (Baltic Sea Declaration, Annex IV, Fitzmaurice 1992:269).

3.2.3.5 The Baltic Sea Environmental Action Programme

As required by the Baltic Sea Declaration, a high level Task Force of HELCOM prepared an environmental action programme 'for decisive reduction of emissions in order to restore the Baltic sea to a sound ecological balance'. (Quoted in Helsinki Commission 1992:5-2). The Task Force consists of representatives from the Contracting Parties to the Helsinki Convention, the Commission of the European Communities, and four financial institutions.

The Baltic Sea Environmental Action Programme is based on a set of key principles which act as a framework for specific action. The first principle is that a long-term perspective is required in restoring the ecological balance of the Baltic Sea. Preventative and curative actions are fundamental to a long term approach and preparatory work for the Programme concluded that these would be necessary while addressing existing problems. Controlling pollution at the source, then, was an important principle of the Programme (Kindler and Lintner 1993:11). The minimal success achieved thus far by the Nordic countries and West Germany has taken thirty years while any reduction in the former centrally planned economies is likely to increase once economic activity improves. However, improved economic conditions may well bring increased pollution loads (see also 5.1 and 5.4.3.3). Secondly, the programme acknowledges the importance of the role of natural factors and the necessity to understand conditions in the sea. It also aims to harmonise economic and environmental objectives, as well as national development with regional environmental goals. Due to financial burdens, the establishment of conditions for private sector participation is promoted. Finally, in recognising the administrative and managerial constraints to effective environmental management, the strengthening of local capacities

in the field of human resources and policy reform, is recommended (Helsinki Commission 1992, Ch. 5:2-4).

The Task Force identified 132 "hot spots" in countries in the catchment area. Sixteen of those are in Lithuania. Although the majority of these are situated in the East European countries, there are several problem spots in Sweden. The cost of meeting the recommendations of the Task Force are enormous. The funding needs of the "hot spots" are large and diverse and therefore require individual solutions (Helsinki Commission 1992:6-8). The implications for financing the programme are grave. The countries to the north and southwest of the Baltic Sea have among the highest standards of living, productivity, and wage levels in the world while the former centrally planned countries are undergoing massive changes, resulting in poor economic conditions. The latter countries also have a poor credit rating. Under such economic conditions, it is likely that:

> [t]he acute demands for basic items such as energy, food and medicine will undoubtedly impede the financing of the Programme over the medium term. In addition, some of the potential donor countries are suffering a protracted recession (Bergström 1992:26) (see also 6.2).

Some finance arrangements will come from the Nordic Investment Bank, the European Investment Bank, the European Bank for Reconstruction and Development, the World Bank, and the Nordic Environmental Finance Corporation (Helsinki Commission 1992, Ch. 6:5-8). Domestic funding in Lithuania will come from a combination of permit charges, pollution taxes and fines, and state allocations (see Chapter 6).

Expected benefits of the Programme include: improved water quality for the health and well being of those living in the region; improved status of aquatic flora and fauna, migratory birds, and others relying on the Sea; better conditions for tourism and recreation; positive impacts for the fishing industry; as well as capacity and institutional building for the former Soviet countries. Although improvements have already begun, major positive impacts are not expected before 20 years (Kindler and Lintner 1993:30-1).

3.2.3.6 Implementation of Environmental Policy

Cooperation at this level is all very well but the success of the programme rests on the implementation of complementary environmental programmes at the national level. International cooperation cannot work unless it is

supported by grass roots action (see also 7.3.2). There are some groups which may act as watchdogs such as 'Coalition Clean Baltic' which is a network of Green NGOs from the Baltic region. The Lithuanian Green Movement and Klaipeda's Green club are members. Anders Wirdheim published a booklet, "Vad Hander Med Ostersjon", in 1990 about the Baltic Sea environment which was translated and reprinted into Lithuanian by the Lithuanian Greens.[14] This was the first book about the state of the Baltic Sea to appear in Lithuania and was released in 1992. International NGOs such as these are seen as critical to hopes of co-operative action in saving the Baltic Sea (Arby 1990b:13).

Decision-making in Lithuania does not seem to prescribe to any particular model as participants try to shake the soviet-style process that cannot be reconciled with western values and thinking. As stated earlier, no matter which model one prescribes to, a problem must be defined before action can be considered. In the case of the Baltic Sea, a problem does exist and as concern has grown throughout the region, scientific evidence has mounted to support the claims. The formulation of international agreements, such as 'The Baltic Convention' and 'The Helsinki Convention', together with environmental policy on the national and local levels in the Baltic countries has been a necessary step toward protection of the Baltic Sea. However, perhaps more vital is the implementation process at all levels of government. The problems associated with implementing both international and national environmental protection programmes are discussed in Chapter 7 (see for example 7.4.3 and 7.4.3.1).

3.3 **Summary of the Baltic Sea Environment**

The Baltic Sea has a high level of pollution due to several sources (point and non-point) located in all the countries bordering the sea. Since all countries contribute to this problem, improving the situation will require cooperation. Lithuania must demonstrate a commitment to reducing its impact on the sea in the interest of the Commons. Signing various international conventions is the first step but commitment will involve giving environmental issues a higher priority on the political agenda. Organisations and structures are in place to facilitate environmental

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[14] The Lithuanian version is listed in the reference list of this thesis as *Kas Vyksta Baltijos Juroje* (What is Happening in the Baltic Sea).

cooperation in the Baltic Sea area, however the success of these is hampered by desires for autonomy, adverse economic conditions, and the complicated process of domestic legal reform (see Chapter 7). The task is difficult enough for the more affluent countries, let alone Lithuania which is involved in a complex process of transition. With so many changes, it will be difficult for decision-makers (and the people of Lithuania) to keep sight of environmental issues in the face of economic hardship. However, as stated by the Helsinki Commission, these problems are not insurmountable. Cooperation is vital for the future state of the Baltic Sea on which all the countries depend. Fundamental to successful rehabilitation of the Sea is applying the "precautionary principle", thereby reducing pollution at the source. The remaining Chapters will discuss the problems and prospects for Lithuania in honouring such commitments and whether there is evidence of practical and financial support for their implementation. This would be the minimum expected if one was to demonstrate that measures toward an environmentally sustainable society were being taken.

3.4 **Waste Water Treatment**

Antanyniene *et al.* (1994:81) recommended that waste water treatment facilities, along with improving production technologies be introduced without delay in order to reduce the eutrophication in the Nemunas river and Kursiu Lagoon. Such improvements to river water quality through the construction and upgrading of treatment plants have been the major priority of environmental programmes in Lithuania in line with HELCOM requirements to reduce pollution loads on the Baltic Sea. Fulfilment of these standards (BOD:15mg/L, total-N:12mg/L, and total-P:1.5mg/L) requires a corresponding reduction of 86 per cent, 65 per cent, and 80 per cent respectively (K-Konsult and Krüger Consult 1992:3). Waste water treatment has also been a primary focus of both international and domestic funding (see 6.2.3.2).

In 1988, only 30 per cent of the Soviet Union's waste water was adequately treated (French 1990:17). In Lithuania, the problem is nation wide, however it is particularly problematic in the major cities. Several small towns and industries are equipped with waste water treatment plants, whereas some larger cities have no facilities. There are five municipalities larger than 200 000 person equivalents (p.e.), yet the discharges from three cities alone; Vilnius, Kaunas, and Klaipeda, account for almost 80 per cent of the total municipal discharges for the country (Helsinki Commission 1993b, Ch. 3:9).

Discharges are a combination of municipal and industrial waste. The industrial effluent includes tannery, metal finishing, petrochemical, pharmaceutical, and electrical equipment waste (US EPA 1995:3).

There are 14 waste water treatment plants under construction in Lithuania. The "hot spots" identified are in the main cities of Kaunas, Klaipeda, Vilnius, Siauliai, and Palanga (see Figure 3.1). The daily discharge of registered waste water in Lithuania is 925 000 m^3. Approximately 24 per cent of this is treated, 22 per cent is untreated, and about 54 per cent is inadequately treated[15].

Figure 3.1 Location of Wastewater Treatment Hotspots

15. There is an apparent disparity in figures on the treated/untreated proportions. The report by K-Konsult and Krüger Consult (1992:22) states that 35% is biologically treated, 40% is mechanically treated, and 25% is untreated. This may be partly due to the categories used but even considering such differences the level of treated water provided by K-Konsult is higher than the estimate of Houston and Tunnicliffe. Nevertheless, the expected increase to 81 per cent treated according to HELCOM standards is a considerable improvement on past achievements.

Ninety per cent of the untreated water is discharged from Kaunas, situated on the confluence of the Neris and Nemunas rivers which flow into the Baltic Sea. Upon completion of treatment facilities, 81 per cent of waste water will be treated to HELCOM standards, 18 per cent will be inadequately treated, and 1 per cent will remain untreated (K-Konsult and Krüger Consult 1992:2 and US EPA 1995:2). Following the construction of the waste water treatment plant at Kaunas and Klaipeda and the reconstruction of the existing plant at Vilnius, BOD will be reduced to 10 000 tonnes per year (70 per cent reduction), total phosphorous to 9 500 tonnes per year (20 percent reduction) and total phosphorous to 2 500 tonnes per year (15 per cent reduction). With the added benefits from the other improved treatment facilities, Lithuania should be able to meet the required 86 per cent reduction in BOD, but other measures to reduce nitrogen and phosphorous leaching into rivers will need to be taken if they are to meet the required reductions of 65 and 80 percent respectively (K-Konsult and Krüger Consult 1992:3,6) (see also 3.4.4).

The major sources of information on the waste water treatment in the Nemunas Basin area are the Environmental Protection Department Report to UNCED, 1992 (Environmental Protection Department 1992) and the Pre-feasibility Study of the Lithuanian Coast and the Nemunas River Basin - Technical and Synthesis reports (K-Konsult and Krüger Consult 1992). The latter was set up under the Baltic Sea Environment Programme with aims of reducing pollution of the Baltic Sea and the Nemunas River Basin in line with the Baltic Sea Declaration. A subsequent study by UK consultants, Houston and Tunnicliffe (1994) was prepared to ascertain priority areas for allocation of 2 million ecu (USD 2.65 m) to be provided by PHARE which also provides relevant data.

3.4.1 The Environmental Impacts of Waste Water on the Nemunas

The Nemunas, Lithuania's longest river, is 937 km in length. The first inhabitants to the basin came 12 000 years ago, and it became particularly important to the Grand Duchy of Lithuania in 11-18th centuries. Now, all major industrial centres (excluding Siauliai and several Soviet towns) are located in the Nemunas River basin. The average population density in the basin area is 55 inhabitants per km^2 with 100 inhabitants per km^2 in Kaunas (K-Konsult and Krüger Consult 1992:9). A number of sources in Byelorussia, Lithuania, and Kaliningrad impact on the Nemunas. Much of the pollution begins in Byelorussia where there are treatment plants discharging up to

110 000 m^3 per day with a BOD content of up to an incredible 316 mg/L (compared with the HELCOM target of 15mg/L). The Sovetsk plant in Kaliningrad discharges 16 000 m^3 per day but with a BOD content of 525 mg/L. Sovetsk is also home to an old sulphite pulp and paper mill which creates additional pollution problems including chlororganic substances and ammonium nitrogen (K-Konsult and Krüger Consult 1992:26-32).

There are 3.1 million p.e. connected to the sewerage system discharging into the Lithuanian part of the Nemunas. The total number of inhabitants is 2.2 million in 69 sewered areas with around 65 per cent of those connected to the sewers. The discharge of major industries is estimated at 1.7 million p.e. (K-Konsult and Krüger Consult 1992:2-3). As a result of such loads, together with the pollution from Byelorussian sources, the Nemunas river is expected to become dead if measures against pollution are not taken (Environmental Protection Department, 1992:68). Adamkus, a Lithuanian American working for the US Environmental Protection Authority, Great Lakes District, and well known for his work in Lithuania, told authorities in 1990 that it would be too late for the Nemunas in three years time if the treatment facilities were not constructed (see also 3.4.1.1).

The concentration of industry in the basin has had a significant impact on pollution levels in the river. There is a large variety of industries located in the catchment including, food processors, textile and tannery companies, oil refineries, chemical plants, and pulp and paper mills (the two largest are in the Kaliningrad region). (Helsinki Commission 1993, Ch. 3:9). The combined system of industrial waste and municipal waste creates further problems for the development and implementation of effective waste water management techniques (Helsinki Commission 1993, Ch. 5:13). Thus, measures need to be enforced at the source, reducing the load on the treatment plants and improving overall water quality. Treatment facilities at factories can also provide economic savings by allowing recycling of resources (including water) and improving energy efficiency.

One of the largest problems associated with the treatment of sewage and industrial effluent in Lithuania is the treatment and storage of sludge (K-Konsult and Krüger Consult 1992:27). Municipal sludge is seriously contaminated by heavy metals due to the connection with industrial sewage. This is often disposed of in gravel pits or other landfills but this has serious impacts for the quality of the groundwater (Helsinki Commission 1993, Ch.

3:9). Some industries use sludge drying beds but these often become sludge lagoons since drainage is poor (K-Konsult and Krüger Consult 1992:3). This sludge causes hygiene problems and threatens trees in nearby forests due to heavy metal contamination. It also has negative effects on the quality of groundwater. One such lagoon in Siauliai increases in size by around 10 hectares per year (Houston and Tunnicliffe 1994:25 and K-Konsult and Krüger Consult 1992:27).

3.4.1.1 Kaunas

Kaunas is the second largest city in Lithuania with a population of around 500 000 people and accommodating several large industries, yet no treatment facilities exist. It is one of the largest contributors of pollution in the country accounting for 90 percent of Lithuania's untreated sewage. While this figure indicates the seriousness of the city's environmental impact, it also highlights the possibility for large improvements in overall water quality if waste water treatment is addressed. About 69 per cent of domestic consumers are connected to the sewerage system while almost all industrial and commercial users are connected. The total length of the sewer is 500 kilometres. The volume of waste water discharged from the city in 1992 totalled 64.7 million m^3 (reduced from 75.9 million in 1989) with industrial, commercial, and domestic accounting for 30 percent, 13 per cent, and 57 per cent respectively. All this waste water is discharged, at nine large outfalls, into the Nemunas and Neris rivers. The BOD concentration is increased from 3 to 5 mg/L (when measured either side of the city) and ammoniacal nitrogen from 0.18 to 0.30 mgN/L in the Nemunas near Kaunas (K-Konsult and Krüger Consult 1992:53 and Houston and Tunnicliffe 1994:10).

The process of site selection for the sewage treatment plant was rather protracted and, in such a way, has similarities to the oil terminal process discussed in Chapter 2. However, on this occasion, Greens were protesting about it *not* being built. The site was selected in 1991 (although discussions had begun in 1987) and is located close to the city which has economic benefits in terms of pumping costs. The long delay in beginning construction was a frustration to local environmentalists (see 4.3.4.1) despite rumours that it was their concerns that were holding up the decision about where to build the plant. Several Kaunas Greens went as far as conducting a hunger strike in front of the Kaunas municipal offices in 1989 in protest of the continued procrastination (Zemulis 1992a:2). Following that protest the

decision to construct the plant near lake Ezerelis was announced in front of the strikers' tents. The decision was later reversed as the project was thought to be uneconomical and other groups protested, such as a nearby collective farm and the Agricultural Academy (Zemulis 1992a:2).

Debate surrounding the plant seemed to quieten, with officials concerning themselves with other matters as an election drew close. Even a proposal from Valdas Adamkus was allegedly ignored. The election of Greens leader, Saulius Gricius, to the position of Deputy Mayor, saw a renewed debate regarding construction of waste water treatment facilities. A choice was to be made between three sites; Ezerelis, Pypliai, and Marvele. Eventually the Marvele site, proposed by Swedish firm K-Konsult, was chosen as a 'lesser of three evils' (Zemulis 1992a:2). There was some opposition to the Marvele site from local residents and architects on aesthetic grounds. Sites further from the city would have involved increased piping and pumping costs (pers. comm. Linas Vainius, February 1997).

The total cost of construction of the plant is estimated at around USD 50 million with associated works in the longer term requiring a further USD 120 million (Houston and Tunnicliffe 1994:11). The original design capacity was well above required capacity, once again due to a reduction in water use in both domestic and industrial sectors associated with economic decline. The plant was down-sized from a capacity of 420 000 to 260 000 m^3 per day. The average flow rate in 1992 was around 177 000 m^3 per day, leaving room for growth in all sectors (Houston and Tunnicliffe 1994:10-12). The over capacity was based on unreasonable forecasts of population and industrial growth, a legacy of Soviet-style planning. The down-sizing involved altered technical requirements and some construction was abandoned and some rebuilding was necessary, all of which increased construction costs. It will, however, be more efficient operating at a smaller scale. The industrial load requiring processing at the plant might be reduced by employing waste minimisation strategies at the Jonava fertiliser plant and Kaunas artificial fibre factory initiated by the World Environment Centre (PHARE and FENVIRON 1994:46).

The Swedish firm, K-Konsult and Danish firm, Krüger Consult have been involved in preparations for the construction of treatment works in Kaunas funded by the Nordic Investment Bank. Finland and the EBRD have also contributed to financing arrangements (see also 6.2.4.5). Although Kaunas

was in a more difficult starting position than the other towns since there was no treatment plant in existence, Houston and Tunnicliffe (1994:15) argue that the project 'is ambitious in both engineering and financial terms ... [and] the affordability of what is proposed has not been addressed as carefully as it should be'. Given the economic situation in Lithuania, particularly as it is often used by governments an excuse for failure to act on environmental concerns, more careful use of funds in environmental projects should be expected.

3.4.1.2 Vilnius

The existing mechanical (primary) waste water treatment plant in the capital city serves a population of around 600 000 with the commercial and industrial sectors increasing the total load to around 700 000 p.e.. The average flow rate in 1992 was 220 000 m^3 per day with an associated pollution load of 43 tons of BOD and 71 tons of suspended solids per day. The plant discharges into the Neris river which forms part of the Nemunas catchment. The average BOD concentration increases from 3.5 to 5.7 mg/L and the concentration of ammoniacal nitrogen increases from 0.34 to 0.49 mg/L as if flows through Vilnius. The Soviet equipment used at the plant is in disrepair, is energy inefficient, and unreliable. Whilst there was no biological (secondary) treatment at the plant, construction of an aeration system was completed in 1992. The arrangements for sludge disposal are inadequate, especially in the medium to long term and there is also a need to upgrade the sludge treatment process (Houston and Tunnicliffe 1994:6 and K-Konsult and Krüger Consult 1992:52).

In 1992, it was decided that the primary treatment facilities should be significantly upgraded and the secondary works under construction should be brought into full operation so as to meet the requirements of the HELCOM agreement. It was recommended by Danish consultants that the focus be on improving the existing mechanical treatment plant which would then improve the performance and reliability of the biological process. It would also improve the quality of the effluent entering, and therefore leaving, the secondary phase. However, Houston and Tunnicliffe (1994:7-8) found no evidence that such recommendations were being implemented, despite agreement from municipality and Enterprise representatives that updating the existing plant would have a greater positive impact for the same amount of expenditure. Local funding (about 40 per cent of the state's allocation to

waste water treatment and 60 per cent of that required to complete the secondary works) seemed to focus on the construction of secondary treatment facilities which were completed in October 1996. It is the only plant of the five largest proposed to have been completed (as at the time of writing, February 1997).

3.4.3 Other Waste Water "Hot Spots" Impacting on the Baltic Sea

3.4.3.1 Klaipeda

The coastal town of Klaipeda is Lithuania's third largest city with a population of around 200 000. It has a diversity of industries, mainly metallic and food based, a ship building dock, a fishing harbour, and is Lithuania's only commercial port (World Bank 1994:6). Unlike other towns, around 90 per cent of waste water is actually collected and treated at the existing mechanical treatment plant. Sewage discharges have also decreased in Klaipeda from 100 000 m^3 per day in 1989 to around 79 000 per day in 1992. The existing plant has been operating for about 16 years so its efficiency is poor and the plant has been plagued by stoppages and accidents such as the discharge of raw sewage into the Kursiu Lagoon (Houston and Tunnicliffe 1994:17). The sewerage pipes are also in poor condition with about 60 per cent of the network being more than 25 years old. Other than age, the acidic effluent of the pulp and paper mill has caused the most damage to pipes. There are 6 pump stations some of which only achieve 45 per cent efficiency, electrical and mechanical equipment are malfunctioning or irreparable, and concrete buildings are in disrepair all of which adds to energy costs (Rust VA Projekt *et al.* 1994:xvii, 56, 53 and Zemulis 1992a:2).

The existing plant was owned by the Klaipeda Paper Mill which no longer operates due to bankruptcy. A decision in 1986 was made to upgrade the plant to be used by the mill only, with a new plant being constructed for municipal sewage. The upgrading went ahead but with little progress on the sludge treatment component. Construction of the new treatment plant began in 1988, however work stopped due to a lack of funding in 1991, leaving a debt of around USD 7 million to the Polish company which had undertaken the work. The new independent government was not in a position to continue construction and work focused on purely maintaining the site. The design capacity of the proposed new treatment plant was based on Soviet optimistic estimates of growth in the region able to cope with

more than double the current effluent load. The design was subsequently down-sized to cope with 100 000 m^3 per day (Houston and Tunnicliffe 1994: 17-19).

The Commission on Swedish Support to Waste Water Treatment in Baltic Countries funded the preparation of a new pre-feasibility study in 1994. The main physical component of the project was identified as the waste water treatment plant although nine other components were outlined. The removal of phosphorous was indicated as the main priority of waste water treatment in Klaipeda given that it can contribute up to 35 per cent of the phosphate load in the Klaipeda Strait (Rust VA Projekt *et al.* 1994:xxix). The proposed upgrades, which include rehabilitation of water supply and waste water collection facilities and sludge treatment processes, will cost an estimate USD 23 million and will require international assistance provided by Sweden, Finland, EU (PHARE), WWF, the World Bank, with local funding of USD 7 million and an IBRD loan of USD 7 million. The latter is a "soft" loan to be paid back over 20 years with 5 years grace (World Bank 1994:14-15) (see also 6.2.4.5). To complete the plant, a further USD 6 million is required as estimates fell short in the face of inflation. In January 1997, World Bank representatives met with the new Minister for the Environment, Imantas Lazdinis, as well as representatives from Sweden and Finland, about financing arrangements for the completion of the Klaipeda plant (ELTA, January 19, 1997). The new plant will reduce the pollution in the Kursiu Lagoon and the Baltic Sea by significantly reducing BOD, suspended solids, nitrogen, and phosphorous. It will also reduce the number of coliform bacteria in the sewage, heavy metal content (60 per cent) (Rust VA Projekt *et al.* 1994:137, 233).

3.4.3.2 Palanga

Palanga, also situated on the coast, is a popular tourist destination. It is one of five hot spots discharging waste directly into the Baltic Sea with its outlet 18 kilometres down the coast from the town centre. A decision to construct waste water treatment facilities was made in 1983 but construction only began in 1991 and a mechanical plant was operational from early 1993. Secondary treatment was expected to be completed by the end of 1995, however, as at February 1997, the facility was still incomplete primarily ue to financial limitations. The installation of the plant has led to considerable improvement in the water quality in the Sea near Palanga, yet beach closures have occurred at times due to the discharge of untreated or poorly treated sewage (Houston

and Tunnicliffe 1994:22 and Zemulis 1992a:2). Construction mostly used Russian equipment but German technology is being used where possible in the upgrades to biological treatment. The primary reason being the energy efficiency of the German equipment is superior to that supplied by Russia. The energy costs of the plant in 1993 were more than 20 per cent of total operating costs with the more recent increases in energy prices adding to this burden. The use of wind generators was proposed to reduce energy costs. The design capacity of the Palanga plant also required revision and was consequently reduced to reflect more realistic load expectations (Houston and Tunnicliffe 1994:22-3).

3.4.3.3 Siauliai

Siauliai, situated in the north of Lithuania, is a major polluter of the low-flow Kulpe and Musa rivers in the Lielupe catchment which flow north through Latvia, discharging into the Gulf of Riga in the Baltic Sea. The daily waste water load and the pollution content have also decreased in Siauliai due to a decline in the total production of surrounding enterprises. The industrial effluent comes from food processing, tanneries, and machine and electronic factories. The quantity of effluent is expected to increase once industry revives although to what extent is uncertain (Houston and Tunnicliffe 1993:25). There is an existing treatment plant which uses both mechanical and biological processes achieving 60-70 per cent reduction in pollution. However, not all users are connected while the treated effluent is discharged into the Kulpe river, the most polluted in Lithuania. The river has a very low flow rate and, at times, consists almost entirely of treated effluent. The most serious problem is the growing 100 hectare sludge lagoon, located 8 kilometres from the city (Houston and Tunnicliffe 1994:25 and Zemulis 1992a:2).

The decision to build a new treatment plant was made during the Soviet era and construction began in 1990 on a new site near the sludge lagoon. The discharge is planned to be emitted into the Kulpe but further downstream than the existing outlet. Construction has been funded almost solely from state funds which have been inadequate and irregular, thus extending the required time and funds required. The Soviet design included low er quality Russian technology, most of which has already been purchased. The original plan to operate both plants each with a capacity of 60 000 m^3 per day, may have to be reconsidered as the future industrial demand for effluent treatment services is uncertain (Houston and Tunnicliffe 1994:26). The plant has been

funded primarily from the domestic budget with support from the World Bank. Like the Klaipeda project, the budget for Siauliai proved to be too small and the plant is still incomplete (ELTA, January 19, 1997).

3.4.4 Benefits of Improved Waste Water Treatment

As required by the Baltic Sea Declaration, the Environmental Action Programme aims to control and reduce pollution in the Baltic Sea. This entails reducing pollution in the rivers that flow into the Baltic Sea. Separate reports were prepared for various areas. The reduction of waste water is a key objective of the Lithuanian Basin Programme and will necessarily involve a number of complementary actions. The Programme aims to support any actions that would address the specific problems of combined municipal and industrial sewerage systems.

The proposed Action Programme for the Nemunas River Basin (the Programme) would have a number of benefits for the environment, human health, and the economy. If treatment levels in Klaipeda, Vilnius and Kaunas were implemented according to HELCOM standards, the BOD discharge could be reduced by 75 per cent and if all plants were improved, the reduction would be around 86 per cent. Nitrogen and Phosphorous would be reduced by 65 per cent and 80 per cent respectively. These proposed reductions of pollution would improve the quality of the water and, therefore, natural ecosystems. The most significant impact in the Nemunas River would be the reduction of BOD (K-Konsult and Krüger Consult 1992:3 & 88-90).

However, only the expected reduction in BOD comes close to the 50 per cent reduction agreed on in the HELCOM agreement. Consultants suggest that, irrespective of the method for reduction, the discharges of Nitrogen and Phosphorous will not meet HELCOM standards (12mg/L and 1.5mg/L respectively). Therefore, action needs to be taken to reduce the non-point source pollution, caused primarily by agriculture, before the goals of the Baltic Sea Declaration would be met. However, the authors note that substantial benefits would be felt from the significant reduction in BOD and smaller reductions of other pollutants (K-Konsult and Krüger Consult 1992:25&96). The impact of non-point sources such as agricultural run-off has led some to argue for the notion of hot spots to be de-emphasised since eutrophication problems are derived from a large number of sources (Göte Svenson, cited in Zylicz 1993:187). Controlling the use of fertilisers and

pesticides (i.e. maintaining the economic-related reduction in use) would contribute toward improving water quality by end-of-pipe solutions such as waste water treatment (see also 7.4.1.4).

There are also benefits to human health from improved waste water treatment. An improved hygienic standard of the water quality in the water wells will decrease the occurrence of communicable diseases such as Hepatitis A and Shigellosis. Improved water quality for drinking will also be beneficial for human health. A decrease in the use of mineral fertilisers will reduce the health risks associated with nitrate concentrations in water, which is especially hazardous to infants. Further, a decrease in the use of pesticides and an improvement in the quality of municipal sludge used as fertiliser will improve the quality of food produce. Air pollution, a continuing source of acid rain impacting on Lithuanian rivers, should reduce the occurrence of respiratory diseases in industrialised areas (K-Konsult and Krüger Consult 1992:96-7).

Although the cost of fulfilling the suggestions of the Programme are high, there are also several economic benefits pointed out by consultants who undertook a pre-feasibility study. For instance, income could be generated by converting processes that produce chemical waste so that the waste is marketable. For example, it is suggested that copper wash units at ammonia fertiliser factories that create pollution detrimental to fish could be replaced by methanol producing units. This change would remove a pollution problem and still create a valuable product. Income could be further generated if energy and environmental audits were undertaken by the government thereby reducing operating costs. Improved water quality will eventually enhance the fishing industry through larger catches of a better quality, and through better conditions for aquaculture (K-Konsult and Krüger Consult 1992:97).

Tourism also might improve due to the cleaner environment on offer which would, in turn, generate more foreign exchange. However, the benefits of increased tourism must not be over estimated since its presence, particularly on the coast, is also a source of pollution (K-Konsult and Krüger Consult 1992:97). The population of Palanga, for example, increases from 20 000 to an estimated 60-80 000 in the summer. Previously, tourist numbers were twice as high but a combination of economic recession locally and in Russia, hard currency and visa problems for visiting Russians, and a lack of attractions

for Western tourists has had adverse effects on tourist numbers. The reduction in tourism, together with the installation of the mechanical treatment plant, has resulted in a 65 per cent reduction in BOD and suspended solids and a 10 per cent reduction in Nitrogen and Phosphorous (Houston and Tunnicliffe 1994:22). With adequate equipment, including a capacity for biological treatment and sludge treatment processes, an improvement in the tourist trade could be accommodated.

3.4.5 Associated Problems

There are some common problems related to most, if not all, of the current waste water treatment projects in Lithuania. Firstly, the per capita water use is very high - almost twice the typical amount used in a north European country. Although leakage is reportedly low, there is considerable leakage as a result of wasteful practices, particularly in the household sector. Meters have begun to be installed in all new premises and, where possible, old houses and apartment buildings, which should, along with increased tariffs and public education in water efficiency, lead to a reduction in water use. The decline in industrial water use (associated with economic decline) and the subsequent decrease in pollution loads from industry have had a positive impact on water quality in Lithuanian rivers. However, the economic uncertainties make it difficult to predict industrial water demand which has implications for estimating the required capacity of proposed treatment plants.

As a result of the history of high water use in both the domestic and industrial sectors, together with a Soviet legacy of over planning based on optimistic economic forecasts, many of the treatment plants have been designed with a higher capacity than necessary. As the economic situation improves, emerging industries are still likely to use less water by employing more efficient Western technology. Thus, many of the proposed treatment plants are likely to be more expensive than necessary (Houston and Tunnicliffe 1994:4).

Another problem is that the overall approach focuses heavily on technical engineering solutions to treatment. Although they have been crucial, they are all end-of-pipe solutions and it is clear that they have not at least been economically efficient. Alternative methods such as recycling for use in greenhouses, forestry, agriculture, or aquaculture have not been seriously considered. Also, the problem of sludge storage or treatment needs to be more adequately addressed. In Siauliai it was proposed, as part of the redesign

of sludge treatment processes, that biogas generation from sludge could reduce the plant's energy costs by up to 50 per cent (Houston and Tunnicliffe 1994:28). Other measures at the source which reduce the contamination in water discharged are just as important as the end-of-pipe treatment facilities. Such measures not only reduce the pollution load on rivers, they also improve the efficiency of the treatment plant and reduce the corrosive impact of substances (such as those with a high acid or alkaline content) on plant machinery and the sewer lines. The installation of grease traps at some food factories limits the fat concentration of effluent which can otherwise lead to blocking in the pipes (Rust VA Projekt *et al.* 1994:109).

The financing of the plants has also been problematic. Houston and Tunnicliffe (1994:5) point out that although the Lithuanian Government has provided significant funds for the construction and upgrading of plants, these have been allocated across different projects on a year by year basis leading to uncertainties regarding its availability and thereby planning for completion. The government was also slow in initially committing funds. According to Houston and Tunnicliffe, this has raised overall costs of the projects. Bad debts have also been a problem for the water authorities. Some treatment services were owed sums equivalent to up to 4 months' income from tariffs. People pay for all their utilities (water, hot water, electricity, telephone, gas) at the local agencies which then transfer the money to the Municipality which then sends it to the water authority. During these transfers, up to 50 per cent "disappears" into other municipal priorities (Houston and Tunnicliffe 1994:8-9). It will take some time before infrastructures are in place to allow a direct payment to the authority. It is not only the issues of funding and poor supply of equipment that have held up the projects. Zemulis (1992a:2) points out that the old structures of management have crumbled but the new structures are inadequate and inefficient while decision-makers still fail to consider the long-term environmental consequences of their actions (see also 7.4.3.1).

3.5 **Summary of Waste Water Treatment in Lithuania**

The treatment of waste water has become the highest priority of environmental rehabilitation and protection in Lithuania. The government's aim has been to meet the commitment to reduce pollution of the Baltic Sea by 50 percent as agreed in the Convention on the Baltic Sea Environment Also, to reduce BOD, nitrogen, and phosphorous loads according to HELCOM

standards as set out in the Baltic Sea Joint Environmental Action Programme. Lithuanian rivers have suffered from an overload of pollutants from a variety of sources including agricultural run-off, acid rain, and municipal and industrial effluent. The latter has contained high levels of nitrogen, phosphorous, heavy metals, chlororganics, petrochemicals, detergents, and ammonia. If the planned construction and upgrading of treatment plants is completed at least the BOD requirements could be met. However, reducing the nitrogen and phosphorous contents to HELCOM standards will prove more difficult. Whilst the Lithuanian Government has continued to provide finance for treatment plants, there have been a number of problems associated with their design and construction. Funds have been wasted and projects have dragged on. Funding for such capital-intensive works has necessarily required international assistance and loans. The processes involved in such assistance and an evaluation of its direction is presented in Chapter 6. There are also administrative obstacles to the effective operation of treatment services which would need to be overcome if they are to be efficient in the future. Some of these are discussed in Chapter 7.

There have already been some reductions in pollution loads which have had a positive impact on river water quality and the completion of the treatment plants should improve this further. It is important that financial and technical support is also provided for reducing the pollution load at its source (such as environmentally sound technology in industry and incentives for farmers to use biological methods of fertilising) since this will improve the quality of the water entering, and therefore leaving, the treatment plant. Such preventative measures form a guiding principle of the Baltic Sea Joint Environmental Action Programme. The focus away from end-of-pipe solutions (by reducing the load on them and the need for further extensive treatment of sludge, for example) will improve the efficiency of the plants and, in turn, overall water quality.

Financing of waste water treatment projects has involved international assistance from bilateral and multi-lateral donors, together with the major proportion of the state government's environment allocation. Thus, together with nuclear safety, the issue of waste water treatment has detracted funds from other important environmental problems (see 6.2.3). A willingness to continue to provide such a proportion of state funds for environmental concerns once the projects are completed would be an indication of a commitment to environmental protection (see Chapter 6).

3.6 Conclusions on Water Pollution in Lithuania

Enormous economic barriers must be overcome for Lithuania to improve and protect the environment. It is estimated that the construction and/or upgrading of the planned sewage treatment plants in 4 major cities (Vilnius, Kaunas, Klaipeda, and Siauliai) will cost 177 million ecus and a further 15 million each year for maintenance (K-Konsult and Krüger Consult 1992:98-9). Thus, there must be an improvement in the economy in order to be able to meet the enormous costs for implementing environmental policy. But the economy cannot be improved and maintained if environmental effects are not reduced and economic growth will most certainly bring with it added environmental problems.

> The challenge of restoring the environment by breaking with ineffective past systems should constitute one of the cornerstones of the overall reform process. Continued disregard of the environment will not only affect the quality of life of the population, but also ultimately reduce economic productivity and increase production costs. Thus, environmental improvements must proceed hand in hand with economic structural reforms....The difficulties of successfully matching these objectives are of course enormous, yet they can be surmounted. (Helsinki Commission 1992, Ch. 4:3&6) (see Chapter 5 for further discussion on the links between economics and environmental policy).

There are, however, other problems which are perhaps more serious than the economic difficulties faced by Lithuanian governments. These include ineffectual methods and administrative structures, corruption, secrecy, and lack of legal avenues for participation and appeal of decisions, all of which have been inherited from the Soviet system. Both case studies have hinted at such practices, leading to delays which have consequences for the environment (see Chapter 7).

Concern regarding water pollution, especially in the Baltic Sea, has led to action from the Lithuanian Government. They have provided significant amounts for the environmental sector (albeit much less than industry and banking allocations), which have gone some way to turning the water pollution situation around. This decision has been strongly influenced by the role of the international community. Firstly, Lithuania signed the Baltic Sea Joint Environmental Action Programme which set reduction targets at 50 per cent and outlined maximum allowable discharge levels of BOD, nitrogen, and phosphorous. The pollution affects several nations, including wealthier Western nations that are members of the EU with which Lithuania would want to maintain good relations. Lithuania is, therefore, more inclined

to act on issues affecting not only their domestic environment but that of those EU members. Those nations, in turn, are placing pressure on Lithuania to act and have the advantage of available funding to encourage the development of waste water treatment. They have also used this self-interest to fund nuclear safety. The international community are less likely to assist with environmental problems which do not pose a transboundary threat. Thus, improvements in water quality, like decisions surrounding the energy sector, also have a political motivations at their core (see also Chapters 6-7).

Whilst these measures taken to construct or upgrade treatment facilities are clearly necessary, they are focused on end-of-pipe solutions and, in such a way, will always be limited in their capacity to reduce pollution. They are an important starting point, but measures which reduce the pollution load on the treatment facilities are crucial to environmental protection. Continued financial support for the environmental sector upon completing the waste water treatment plants will indicate whether the comparatively high annual allocations (1993-1995) are really an indication of government commitment or whether they represent an immediate (short-term) response to a critical situation under pressure from the international community. As Chapter 6 demonstrates, a decline in government spending on the environment is evident in the 1996 allocation, indicating that "commitment" was only short-term in nature. The reductions in water pollution achieved so far (and particularly on the completion of all projects) will not be maintained if protection measures are not put in place in the agricultural and industrial sectors.

Chapter 4: National Identity, the Environment, and Social Change

4.1 Introduction

The significance of the preceding case studies must be viewed in terms of the social, economic, and political situation in Lithuania. All of these are interrelated; processes and events in the social sphere cannot be analysed in isolation from economic, political, and environmental events while political decisions are influenced by events in the other spheres. This chapter focuses on some social aspects of the situation in Lithuania. It would be beyond the realm of this thesis to discuss all social processes and issues, many of which could be argued as significant in terms of overall environmental policy. It includes a discussion on some specific issues such as nationalism which have direct consequences for the way in which social and environmental policies are developed. The examination of nationalism aims to ascertain its impact on political, economic, and environmental decisions and its effects on the creation of an environmentally sustainable society in Lithuania. Nationalism could have positive implications for such a society, however, in the main, it generates attitudes and aspirations which have a distinctly negative impact on the way in which environmental policy is developed and on attitudes toward the environment in general. Nationalism, as a specific form of politics, was once argued to be largely finished (Breuilly 1993:340). However, developments in Central and East Europe (CEE) and the republics of the Former Soviet Union (FSU) have shown that nationalism is not finished in world politics.

This chapter also examines social movements in Lithuania with particular attention to *Sajudis* (the Reform Movement) and the Green Movement. These two groups, with overlapping membership, played significant roles in the restoration of independence in 1990/1 and have, therefore, been influential in shaping the emergent political sphere. Both groups were strong advocates of environmental issues and, in addition, embraced nationalism as a form of dissent. This chapter explores their development, their impact on society, and their future.

4.2 Development of National Identity

> In the struggle to achieve Baltic independence and Baltic national identities, memory, and memory reworked as myth, have always been as important as economics or diplomacy, let alone tanks or guns (Lieven 1993:54).

Perceptions of the past are important not only in discussing the recent restoration of independence but also in relation to future directions in Lithuania. Only by reconstructing the past and modelling contemporary reality can future prospects be developed (Samalavicius 1994:67).

4.2.1 Perceptions of Nature in Lithuania: A Short History

The pagan faith of ancient Lithuania was environmentally benign with people seen as an integral part of an equal, although venerated, natural world. The belief in the reincarnation of the spirit into other living things such as flowers, trees, and birds, together with the perception of nature as part of people and people of it, strongly influenced their perception of the environment. They had an image of nature as sacred and alive which provided reasons not to act exploitatively toward it.

There was particular affection toward trees which were often planted to celebrate a new born child and were said to then grow imbued with the same life forces as its human counterpart (Gimbutas 1963:191). They were seen as "mute brothers" and it was believed that if the tree was cut down, then the person would die (Kazokas 1992). Trees were thus sacred for two reasons; their connections with individuals and their role as an abode for the *siela* (spirit). Whole forests were also seen as sacred and to cut down a tree from one of these sacred groves was punishable by death (Kazokas 1992). Such beliefs helped retain the large percentage of old growth forest left standing up to the sixteenth century (Banks 1991:15-6). Areas of soil, rocks, and rivers were also seen as sacred, with sacred hills being a common place for celebrations and other rituals. The sacred rivers were honoured and respected and 'no one dared soil their life-giving water, which had purifying, healing, and fertilizing properties' (Gimbutas 1963:193). The attitudes toward soil and water were particularly important to agriculture which has been the primary occupation of Lithuanians for centuries. Thus, most customs and traditions are not only linked to agriculture but were also influenced by it. The important gods were those that affected the crops and livestock on which Lithuanians depended (Brazyte-Bindokiene 1989:48). Although pagan Lithuanians had

many gods, Earth was the Great Mother goddess (*Zemyna*) who was the life-giving force and 'all manifestations of [her] fecundity were lovingly cared for and protected' (Gimbutas 1963:196).

The agrarian culture, then, added to this background to form a culture of respect for the land and what it could provide. It is such traditions which led to hopes for a revival of an environmentally sustainable way of life since environmental issues had been a prominent feature of the dissent which brought about independence (see also 4.3.1.1). Despite a return to pagan lifestyles among some sectors of society (see 4.3.2), later changes have proved more stoic in their influence such as the centuries of catholicism, Tsarist and Soviet domination, and the more recent pull of the economic rationalist Western world (see 5.4.2).

When the Lithuanian Grand Duke, Jogaila, converted to Christianity in the fourteenth century, his first action was to cut down the sacred trees (Lieven 1993:41). Conversion was met with considerable resistance and it was several centuries before it took hold. The Bishopric of Vilnius was established on February 1, 1387, and all pagan practices were forbidden. However, paganism clandestinely continued into the twentieth century (Sruogiene-Sruoga 1987:25) and many aspects were absorbed into Lithuanian culture. So, despite 610 years of Christianity, many of Lithuania's current customs have their roots in paganism. However, they now do not hold the same importance and have become more an aspect of recreation, particularly in the holiday season (Brazyte-Bindokiene 1989:48). Lithuania's existing religious tolerance, which stemmed from the separation of policy from religious ideology, was instrumental in preventing the complete permeation of Catholic attitudes into Lithuanian culture, particularly between 1550 and 1580 (Kavolis 1989:10,14). Early travel chronicles point to a tolerant society which never persecuted foreigners for their beliefs. Yet, if an attempt was made to impose other values on them or ridicule their way of life, the pagan Lithuanians were very stubborn and remained steadfast in their convictions (Brazyte-Bindokiene 1989:50). Today, the Catholic Church is one of the largest institutions in the country, with around 85 percent declaring themselves as Catholic.

Christianity, contra paganism, established a dualism of humans and nature, ordaining humans with the power to exploit nature not only for their needs but also their wants. It advocated a homo-centric perception of nature with

humans situated at the top of the pyramid of life. Only God was superior to humans. Given that Christianity does not include the notion of animism, it was 'possible to exploit nature in a mood of indifference to the feelings of natural objects' (White 1971:10-11). Animism, which is still evident in Baltic literature was replaced by 'the cult of the saints' who were seen in the likeness of humans and their abode was not within trees but in heaven (White 1971:11, 14 and Lieven 1993:114). Thus, in the Christian perception, humans are not nature's equal but, rather, nature's master. While such a perception does not necessarily dictate exploitative behaviour, it offers no resistance (McLaughlin 1985:300) and eventually the desire to develop and dominate becomes paramount. This transition took place over much of the Western world, morally justifying "events" such as the industrial revolution. For example, the liberal philosophies of writers such as John Locke focus heavily on the rights and duties of humans to God, the creator. In Locke's perception, the lower ranks of creation 'were placed in the world by God so that they may be instruments of human preservation' (Parry 1978:41). With nature seen as instrumental to human needs and wants, it does not matter if forests are destroyed or fertilisers are over-used. Chapter 5 examines how such perceptions (at the root of capitalist society) influence the economic system that a society employs and the consequences of these systems on the quality of the environment.

Perceptions of nature in Lithuania underwent a further change with its annexation to the Soviet Union in 1940. Any environmental problems that existed in Lithuania prior to annexation were compounded by the pro-industrialist soviet policies and by the policy of 'internationalism' which included the processes of 'indoctrination' and 'Russification'. Attempts were made to suffocate the Catholic faith which had become an integral part of the cultural identity. This, together with the Marxist perception of nature as the 'tool house' of humans and the political and economic focus on production, led to not only grave environmental damage but also 'cultural, political, and ethnic genocide' (Silbajoris 1983:9).

Although such perceptions were, at least initially, only at an official level, they influenced the daily practices of those growing up in the system. The image of nature created by the Soviet ideology was superordinate to any other perceptions held by the Lithuanian people. That image viewed nature as inferior to humans and its only value was as a source for improved productivity (Kalensnik and Pavlenko 1976:128 cited in Thomas 1987:3-4).

Those with different perceptions were unable to express their concerns publicly, eliminating any limiting or controlling influence of interest groups such as in the West. Thus, there were no boundaries for exploitation and manipulation (McLaughlin 1985:300). So while the Christian tradition tolerates and accepts development which degrades the environment, the Soviet perception of nature imposed on Lithuania in 1940 sanctioned and indeed dictated environmentally unsustainable development.

The Gorbachev reforms in the late 1980s facilitated a measure of public opposition to environmental destruction and, ultimately, the development of organisations such as the Green Movement. They established a political environment more accommodating of pressure groups and environmental activism began to surface which was based on other perceptions (see 4.3.1). Environmental issues were a major focus of pro-independence rallies and quickly accrued popular support, not least of all because of the perception amongst the central authorities that such issues were essentially apolitical. The previous restrictions on such behaviour prevented the establishment of a Green Movement any earlier than 1988 and limited its capacity to reach the depth found in Western Green movements which developed over several decades (see 4.3.1.1 and 4.3.4.1). The apparent widespread support for environmentalism was influenced by a growing awareness in the West of the finite capacity of the earth to support the needs and wants of the modern world and of the environmental problems associated with such limited capacity.

Factions of the Green movement around the world have begun to look back to pagan perceptions of nature as an alternative to the economic rationalist global system and its environmentally destructive consequences. Likewise, parts of the Lithuanian Green Movement have turned to the beliefs and practices of their ancestors. Lithuanian pagan beliefs certainly have a role in a notion of environmentally benign society and it is true that many of the pagan symbols and practices were incorporated into Lithuanian Catholicism or into every day cultural traditions.[1] For example, traditional crosses (the making of which is a specialised skill passed on through generations) have pagan origins, primarily focusing on the sun goddess or symbols of fertility such as the snake. All Souls Day, a regular event on the Christian calendar when people remember the dead, actually stems from pagan times when

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1. This is also the case in general - many Christian festivals have pagan roots.

there existed a period of ten days in early November known as 'the days of longing' (Jomantiene 1994:11). The 'Man of Sorrows', *Rupintojelis*, is a common figure, typically carved from wood and depicted with his head against one hand and wearing a wreath-type crown. Reflected in many ancient hymns and folk songs and found in most homes, cemeteries, and at sites of historical significance, he is pagan in origin but has, for centuries, been depicted as Christ (Lieven 1993:28). Early Lithuanian immigrants stunned their Australian counterparts by bringing food to church for blessing, clearly remnant from pagan practices of offerings to the gods in order for a good harvest (Genovaite Kazokas, pers. comm.). These neo-pagan elements found in contemporary Lithuanian culture, having been thoroughly mixed with Christian traditions, are not only different from the original paganism but also quite distinct from neo-paganism in modern Western Europe (Lieven 1993:114).

Lithuania's history of resistance, such as fighting against the Teutonic Order, is also important in the development of cultural identity, particularly in terms of a culture of independence. At the time, Lithuania was a powerful force and such resistance, which prevented the total expansion of the Order (Gimbutas 1963:172), has become an integral part of their identity. This history of resistance continued with the partisan movement in Lithuania following annexation to the Soviet Union. The partisans lived in the forests, often growing their hair which linked them to medieval ancestors. Up to 20 thousand Soviets and 13 thousand collaborators were killed by partisans in Lithuanian forests while a similar number of Lithuanians were lost (Lieven 1993:90). The forest was not only a practical hiding place. The guerilla war has been depicted as a conflict between 'city' and 'forest', with the partisans fighting to protect the traditional way of life (Lieven 1993:89).

Historical influences, while important in the unique expression of identity, do not translate directly to present practices. That is to say, historical connections with the land are not tantamount to modern environmentalism. The pursuit of economic rationalism since the restoration of independence in the race to join Europe indicates other, perhaps more influential, forces at play (see 5.4.3.1 and 5.4.4). These forces (as outlined in the following chapter) have proven to be more powerful than the pagan connection. As the sections below will demonstrate, environmentalism in Lithuania was really closer to anti-colonialism - a platform for change - than a direct association with pagan ancestry. That is not to say that it did not have some historical roots

in paganism, only that those connections cannot be extrapolated directly to present actions. Regardless of any pagan influence, the Lithuanian identity has become strong in character and has, at times, been expressed as nationalism which should be investigated for its potential as both a hindrance and/or a buttress to the development of an environmentally sustainable society.

4.2.2 Nationalism

In the previous chapters, national sentiment was mentioned as a possible hindrance to international environmental co-operation and, therefore, protection. This chapter looks at nationalism, and its role in shaping the country's future, in more detail and demonstrate how it is one of several factors influencing the current situation in Lithuania. The term *nationalism* can have either positive or negative connotations depending on the circumstances in which it is used. This may be dependent on cultural perceptions of nationalism (which is strongly dependent on the generally perceived definition) or on the political climate at the time. 'Some people see it as a modern form of patriotism that stimulates people to work for the good of their nation, whereas others demonize it as backward, irrational, and intolerant' (Karklins 1994:3).

What does nationalism mean? Is it possible to have different types or levels of nationalism? If so, what kind (or kinds) of nationalism are distinguishable in Lithuania and what affect do they have on the environment?

It is not the task of this thesis to analyse nationalism as a phenomenon, to explain its existence, or add to the plethora of writings on the topic. Several authors have provided a variety of explanations for the existence of nationalism and its recent resurgence. However, in order to assess the nature of nationalism in Lithuania and its impact on society, some brief discussion of its origins and types of nationalism presented in theory[2] seems in order. Bakunin argues that 'nationality has no right to be concerned with itself until that right is denied' (cited in Bookchin 1994:32). The Lithuanian example demonstrates how, even after reclaiming that right, concern for nationality among decision-makers and the people at large has persisted.

Several writers, termed 'contextualists' (similar to Karklins' 'situationalists'),

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2. The main texts used are Kellas 1991, Breuilly 1993, and Karklins 1994

see nationalism as dependent on the relationship between politics, economics, and culture at a given time in history. They argue that there was a 'pre-nationalist' period in which those relationships were not conducive to the development of nationalism. This argument was put forward by Gellner who stressed the necessity of industrialisation as a precondition for widespread nationalist sentiment. Some writers have stressed the primacy of culture as a causal element in the development of nationalism while others have tended to emphasise politics or ethnicity (Kellas 1991). Breuilly asserts that nationalism arises in opposition to the modern state but in the case of the USSR he argues that nationalist movements were a rational response, rather than a catalyst, to the breakdown of the communist system (Breuilly 1993:350). In his view, 'to focus upon culture, ideology, identity, class or modernisation is to neglect the fundamental point that nationalism is, above all, about politics and that politics is about power' (Breuilly 1993:1).

His discussion, therefore, stresses the necessity to understand nationalism in terms of the political context in which it has developed (Breuilly 1993). Breuilly must certainly be seen as a contextualist, or what Karklins defines as an 'instrumentalist', in that by seeing the essence of nationalism as power which, 'in the modern world, is principally about control of the state' (Breuilly 1993:1), nationalism becomes purely a tool for political goals. In this thesis, while it is recognised that nationalism is a form of political activity designed to achieve certain goals (usually economic, political, or cultural rights), its existence is taken to be dependent on the history of the nation's development. With nationalist political activity being commonplace all around the world, Kellas' contention that nationalism must be discussed in the context of politics, economy, and culture, seems most appropriate. The relationship is dynamic and interdependent with each of these factors affecting the others. Thus the state, and the way in which it developed, affects the culture and economy of a society, which may or may not be expressed in nationalist terms, and this, in turn, has an impact on politics, economy, culture and, subsequently, the environment.

4.2.2.1 Defining Nationalism

Writers on nationalism admit to the difficulties involved in defining their field of interest. For example, Karklins, whose focus is on ethnopolitics as distinct from nationalism, argues that the concept of nationalism is complex. Such complexity is evident in Breuilly's analysis where fifteen pages are

used in defining the term. A general definition is found in the Collins Concise Dictionary which defines nationalism in three ways: a sentiment based on common cultural characteristics that binds a population and often produces a policy of national independence; loyalty to one's country; patriotism; or exaggerated or fanatical devotion to a national community.

The first is a general definition while the others could be seen as forms or levels of nationalism. The second is usually seen as acceptable and the third tends to carry the negative connotation mentioned above and savours of potential violence. It could be argued that all three exist in Lithuania, although the "fight" for independence, aside from 13 years of guerilla resistance[3] in the earlier years of occupation, has focused on peaceful protests which never resulted in the level of violence recently witnessed in the Former Yugoslavia. Perhaps it never had to reach such a level, for Lithuania has not had to fight for territory in the same way as various displaced ethnic groups in Former Yugoslavia, Czechoslovakia, or the Soviet Union, since the borders of the Baltic countries were almost the same at the time of regaining independence as at the time of Soviet occupation.[4] At what point nationalism becomes exaggerated or fanatical is subjective but a problem exists when nationalistic behaviour becomes an end in itself, without regard for the needs and well being of the citizens, or for the environment in which they live.

David Miller (1992:87) suggests that a common national identity has more to do with shared beliefs than with objective characteristics. In particular a belief that:

> each belongs together with the rest; that this association is neither transitory nor merely instrumental, but stems from a long history of living together which (it is hoped and expected) will continue into the future; that the community is marked off from other communities by its members' distinctive characteristics; that each member recognizes a loyalty to the community, expressed in a willingness to sacrifice personal goals to advance its interests; and that the community should enjoy a measure of political autonomy, normally (but not I think necessarily) in the form of a sovereign state.

Miller notes that his definition assumes little; it does not assume common race or language (although these may be part of the perceived 'distinctive characteristics') nor does it assume anything regarding behaviour. All

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3. The last partisans gave up the struggle after Stalin's death in 1953 (Lieven 1993:89).

4. However, it must be noted that an ongoing border dispute exists between Estonia and Russia as well as a sea border between Lithuania and Russia and between Latvia and Lithuania.

particularist loyalties, says Miller, have at least a potential for intolerant behaviour toward non-members yet not to commit ourselves to such groupings is to ignore their value (Miller, D. 1992:89).

In Kellas' definition, three major categories of nationalism are defined; ethnic, social, and official nationalism. These forms of nationalism may be found, not only among different nations, or ethnic groups denied the right to call themselves a nation, but also within a nation. Ethnic nationalism is found among groups which 'define their nation in exclusive terms, mainly on the basis of common descent' (Kellas 1991:51). Kellas argues that the nationalistic behaviour of such groups tends to be based on a primordial sense of community, referring to the instinctive behaviour of early societies. However, unlike other theorists of nationalism, he suggests that this instinctive behaviour is not bound by time but, rather, it is dynamic. In such a way, it changes within the context of politics, the economy, and culture (Kellas 1991:35, 51-3). The 'primordialists' (Karklins' 'essentialists') explain ethnic conflict as not only natural, but a necessary outcome of ancient and irreconcilable differences.

Although ethnicity can be at the heart of nationalistic behaviour, ethnic politics, as Karklins points out, is not the same as nationalism. Likewise, nationality is not the same as nationalism. 'Nationality gives people the common identity that makes it possible for them to conceive of shaping their world together' while 'citizenship gives them the practical means of doing so' (Miller, D. 1991:94). According to Miller, the notion of nationality does not contain rules about how nations should behave towards one another above the idea that one owes special loyalty to one's compatriots (Miller, D. 1992:88). Thus national identity itself does not really explain nationalistic activity.

Social nationalism, based on social ties and culture rather than ethnicity, is also contextually expressed. However, while this might be a basis for membership of the nation, probably expressed in citizenship, it does not necessarily mean that nationalistic behaviour will result. The identification of commonality, whether ethnic, cultural, or social, is not a cause, or even an explanation, of nationalism. It is a combination of such factors within the context of politics and economy.

Official nationalism is described as 'the nationalism of the state, encompassing

all those legally entitled to be citizens, irrespective of their ethnicity, national identity and culture' (Kellas 1991:52). Official nationalism is likened to patriotism or loyalty to the state. This form is found in the United Kingdom, United States of America, and Australia. This does not deny the existence of social and ethnic nationalists within these states but the official nationalism of the state is linked with the national culture and is not necessarily dependent on a change in political power. While the countries referred to have official nationalism, they are, in part, ethnic and social nations. 'Thus patriotism and cultural homogeneity go hand in hand' (Kellas 1991:52). Ethnic nationalism, depending on the cultural homogeneity or political situation, can also be official nationalism as in Latvia where ethnic Latvians make up 50 per cent of the population but, because Latvian parties control the government, their nationalism is the same as that of the state.

Approaches such as this are presented as theoretical frameworks for analysing nationalism. While Karklins and Kellas highlight the limitations of the 'primordialist' view in describing and explaining nationalism, it could be argued that it is possible for such a view to be held by 'the people'. Thus, in situations such as Israel or Bosnia-Herzegovina, where ethnic differences are seen to be absolute and irreconcilable, compromise and change seem unattainable; only possible if that concept of absoluteness were to change. If the view, or perception, of ethnicity and the conflict were to change, this would demonstrate the fluidity of identity, supporting the assertions of authors like Karklins and Kellas. Karklins argues for a synthesis of essentialist-primordial and situationalist (contextualist) approaches since, although usually based on concrete norms such as language, 'identity is perception'. So, 'the perception of the salience of identity - and how it should be expressed - changes according to context' (Karklins 1994:7). Breuilly also argues that nationalism must be seen in terms of context since it is primarily a form of politics used by political movements seeking or exercising state power. This 'instrumental' approach assumes that the notion of ethnic identity is imagined since nationalism becomes a tool for achieving political aims (Breuilly 1993:2). While Breuilly agrees with Kellas regarding the need to analyse nationalism 'contextually', his discussion focuses primarily on the political context, thereby failing to adequately acknowledge cultural and economic contexts.

Karklins (1994) suggests the existence of 'enlightened nationalism' whereby the good of the nation is interrelated with the good of other nations. She maintains that 'nationalism can be a great unifier within nations' since it

transcends class and other divisions in society, binding people in a larger community. It can locate the individual within a 'people', forming a basis for collective solidarity. The notion of 'the people' is closely tied to the emergence of democracy, so the 'struggle for national and political emancipation often go hand in hand'. For Karklins, this was the case in the FSU, particularly in the Baltic region (Karklins 1994:3-4).

4.2.2.2 Lithuanian Nationalism

Lithuanians, along with Estonians and Latvians, are directly descended from tribes which settled on the coast of the Baltic Sea around 4000 years ago. The Lithuanians and Latvians are descendents of the Indo-European races while Estonians belong to the Finno-Ugric group. Another group, the Livs, are closely related to the Estonians and a few thousand are still found in northern Latvia. They 'have had to share their lands with other races, some of whom dominated them for centuries' which is important for understanding 'the way in which national identities were forged and preserved even under the rule of others' (Hiden and Salmon 1991:2 & 9).

According to Sabaliunas, the Grand Duchy of Lithuania was secular and the Lithuanian nation did not develop until early 19th century, growing in intensity toward the 20th century and coming to fruition in 1918 when independence was established creating a degree of social cohesion. He concludes that the Lithuanian identity, although drawing on medieval times, is actually quite young (Sabaliunas 1990:1-9). Perhaps the Lithuanian nation, and therefore nationalism, is relatively young, however, ethnic and cultural identity preceded the development of the nation-state. Although they were subjected to war and conquest for centuries, they have lived in the area longer than any of their rulers (Germans, Swedes, Russians): 'The kernel of the historical awareness of the Baltic people is the fact that they are directly descended from the original inhabitants of their countries' (Pristohlkors 1990, quoted in Hiden and Salmon 1991:9).

It could be said that nationalism in Lithuania is generally ethnic in origin with Lithuanians having a strong sense of continuity with their ancestors even though the Lithuanian nation itself is relatively new. Anderson, in explaining the emotional power of nationalism, points to nationalists' 'faith in an everlasting life through membership of a continuing nation' (Kellas 1991:46), particularly in secular societies. However, religion can coexist with

nationalism and, in some cases, reinforce it. In cases of supranational religions such as Roman Catholicism or Islam, there may be a conflict of loyalty between the state and the Church. Yet, even supranational churches can 'underpin nationalist movements against oppressive states which deny nationalism its free expression' (Kellas 1991:48). However, whilst the Church has had an important role in the formulation of Lithuanian national identity, it has not always acted to support democracy (see 4.2.2.4).

The modern notion of nationalism has its roots in the emancipation of the serfs throughout Europe in the nineteenth century. The nation became the focus for identity which aided Monarchs to create states by breaking the control of the feudal nobles which later helped nations to break from multinational empires such as Tsarist Russia (Mason 1992:131). Land reform began in Lithuania in 1861 (later than in Estonia and Latvia) and eventually led to the development of a variety of political parties by the early 1900s and a strong resistance to Russification. Society was less diversified than the Baltic provinces because underdevelopment left only a small middle-class on which nationalism could build. Poor literacy levels (32.6 percent were illiterate in 1923) added to this, causing problems for the recruitment of an ethnic administration and giving nationalism a slow start (Hiden and Salmon 1991:18-9 and Hope 1994:54). Literacy gradually improved (the number of students increased seven-fold by the 1930s) and, by the time the national movement re-emerged in the 1980s, high literacy levels actually strengthened the campaigns (Lieven 1993:64). An important event for Lithuanian nationalism occurred in 1904 when the battle was won to have books published in the Latin alphabet instead of cyrillic as imposed by the Tsars. (Sabaliunas 1990:1-9). The fight had begun in the 1880s and included the illegal publishing of a Lithuanian newspaper, *Ausra* (Dawn), first appearing in 1833. The editor, Basanavicius, explained the objectives of the paper as

> to propagate the idea of Lithuanian nationality; to foster a love for the Lithuanian country and its language; to acquaint the readers with Lithuania's history and to demand Lithuanian schools (White 1994:25).

By the beginning of the twentieth century, 'nationalism was being expressed in increasingly subversive terms' and was 'perceived by the Tsarist regime as more dangerous than the traditional particularist claims of the German ascendancy' (Hiden and Salmon 1991:18-9). Tsarist repression was greater in Lithuania than some other republics and nationalist activity had to be carried out underground. At this time, nationalists did not aim for the creation of

an independent Lithuanian state but tended to opt for a loose federation of Lithuania, Poland, and other countries. For nationalists, the large population of Jews and Poles living in Lithuania 'presented problems for any ethnically based definition of Lithuanian nationality' (Hiden and Salmon 1991:20).

Although initially arguing for more autonomy under the Tsars, Lithuanian nationalists tried to secure more than this, which culminating in the declaration of independence on February 16, 1918 and excluding Germany as a protectorate (as had been the case in the past) (Hiden and Salmon 1991:28-9). The ethnic complexity of the Baltics meant that the new leaders faced 'tribalism and ruin, or alternatively, racial tolerance and prosperity' (Hiden 1987 in Hiden and Salmon 1991:46). At the turn of the century, 2.7 million inhabited the area known as Lithuania, of whom 58.3 per cent were Lithuanians (Sabaliunas 1990:1-9). In 1934, with a population just over 2 million this percentage had increased to 84 per cent and in 1945 decreased to 80 per cent where it has remained stable (Hiden and Salmon 1991:46 & 206). In Lithuania, minority rights were enshrined in the constitution of 1920-2. This gave minorities virtually the same rights as those held in the Estonian constitution which has been hailed as a model of its kind. Lithuania had been the first nation, in 1905, to demand autonomy from Russia and this has influenced the creation of the radical, egalitarian constitution (Hope 1994:49). Yet, it has been argued that,

> in reality, Poles and Jews in particular were subject to discrimination from an early date. The early collapse of democracy in Lithuania in 1926 ensured that there was little time for tolerance of minorities to take root (Hiden and Salmon 1991:47-8).

Lithuania faced difficult economic and political restructuring in the 1920-30s. However, they did have the advantage of developed links with capitalist Europe and many administrators, politicians, and business people had experience with of such a system. (In 1991, these markets had to be redeveloped from scratch) (Lieven 1993:61). However, all three Baltic states, under the pressure of economic crisis, abandoned participatory democracy in favour of authoritarian regimes. Yet, land reform during the early 1920s which led to the development of small-scale farms was 'of great political significance because it sanctioned parliamentary republicanism; even during the so-called authoritarian period in Lithuania after 1926', the smallholdings also 'strengthened widespread aversion to communism' (Hope 1994:47).

Antanas Smetona came to power in 1926[5] as a result of a military coup. The extreme right nationalist turned parliamentarianism into a presidential dictatorship and a new constitution was concluded in 1928. He merged nationalist groups into a single patriotic front and, in 1933, reorganised his own Nationalist Party along Nazi lines (Hiden and Salmon 1991:49-54). Despite his strong nationalism, Smetona shunned racial ideology, remained a practising Catholic, and did not hold a revolutionary or violent streak, thereby differing from his fascist contemporaries such as Hitler and Mussolini. He also averted at least thirteen coup attempts by the more fascist Voldemaras and his followers (Lieven 1993:66-8). Some might argue that Landsbergis, as Chairman of the Lithuanian Council 1990-1992, was also heading toward an authoritarian approach as he was often blamed for ignoring advice and avoiding delegation, though this could be attributed to a general fear about who was trustworthy, as allegations of KGB collaboration throughout parliament dominated the press. Landsbergis' right-hand-man, Cepaitis, for example, in whom he confided totally, was eventually discredited by revelations that he had been a KGB informer (Lieven 1993:225). The two leaders (Smetona and Landsbergis) have been likened to one another (see Lieven 1993:68) and in such a way, similarities can be drawn from the two periods of national uprising.

Official nationalism also exists in Lithuania. Today, the state has a more liberal citizenship policy than Latvia, and nationalities other than Lithuanian have obtained Lithuanian citizenship. With only 20 percent of the population made up of non-Lithuanians, the issue of ethnic nationalism within the state has not been, indeed it has not needed to have been, problematic as in Latvia. Ethnic conflicts have been most acute in the capital, Vilnius, where Lithuanians only constitute around 50 per cent of the population (Senn 1990:98). The threat to Lithuanian identity is not seen to be as great as the comparable situation in Latvia.

Between 1987 and 1993, the term 'nationalism' tended to have a particularly derogatory connotation in Lithuania, despite the existence of conservative parties such as the Homeland Union, primarily made up of members from

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5. Smetona was instated as the first President of Lithuania on April 4, 1919 and held office until June 20, 1920 when parliamentary government was established. Two parliaments followed 1992 and 1923. Smetona and two other nationalists were elected to the parliament in 1926 and the Nationalists and Christian Democrats later (December 17) took control of the parliament with the help of the army (Encyclopedia Lituanica, vol. 5:233-234).

the once popular *Sajudis* group, headed by Vytautas Landsbergis, and the Lithuanian Nationalists Party. This perception developed due to several reasons. First, the general political climate in Europe, where the results of extreme nationalism evident in Bosnia and the violence surrounding neo-fascist groups in Germany, have had an impact. Thus, there was a general perception that nationalism can lead to intolerance, violence, and war. No-one wanted to be labelled a nationalist. There were also memories of the nationalist Nazi regime that was responsible for the near annihilation of the Lithuanian Jewish population as well as other Lithuanians, another reason not to be identified as a nationalist. Nationalism is also losing favour in Europe, at least officially, due to the current enlargement of the European Union, of which Lithuania hopes to become a member, although, there is some uneasiness with the so-called internationalism of the new Europe (see also 7.3.1.1). So, while the popularity of nationalistic policies in Europe at the time influenced its acceptance in Lithuania in the late 1920s and 1930s (Mussolini and Pilsudki had seized power and Hitler was gaining favour), the negative perception of it in Europe at the time of restoration of independence influenced its shunning.

Perhaps the most influential factor in this negative perception of nationalism is the memory of the Smetona regime and the constant condemnation that followed from the Soviet propaganda machine. Although Adolfas Sapoka's famous *History of Lithuania,* published in 1936 and which later became the embodiment of discontent, praised the authoritarian rule of Smetona (Senn 1990:25), even Lithuanian nationalists recognise the problems with those years. That period of history was described by Soviet historians as "bourgeois, nationalist Lithuania" a definition that went unchallenged publicly until 1988. During its beginnings, *Sajudis* and perhaps more so, the Lithuanian Freedom League (LFL) faced constant criticism from the government for nationalist and anti-Soviet activity, a charge which the former sought to defend (Senn 1990). The need to defend such allegations may be seen as a political tactic of a group that required some official recognition in order to remain in existence. *Sajudis* sought to shed the 'nationalist' label and often distanced itself from the more 'extreme' Freedom League (a tactic that was to be censured by the emigré community). For example, Vytautas Petkevicius, a writer and prominent *Sajudis* member, thought it necessary to put this disclaimer to the crowd present at a rally on July 9, 1988: 'We distance ourselves from any extremist or chauvinist or nationalist hotheads and we have nothing in common with them' (Senn 1990:89). The impact of the Soviet propaganda

must also be an influence on the perception of nationalism in Lithuania:

> Trained over the years to consider "bourgeois nationalism" something bad, the Lithuanians insisted that the feelings they were expressing should not be thrown into the negative semantic circle of "nationalism", and they also objected to the use of the word *nationalist* by foreign observers (Senn 1990:98).

Nationalism has since lost some of the negative connotations and, with the formation of the Lithuanian Nationalists Party as well as the right wing conservative party, the Homeland Union in opposition to the Democratic Socialist Party, many openly declare their nationalism.

4.2.2.3 Nationalism, the Economy, and the State

The recent upsurge of nationalist movements in Lithuania and other parts of the FSU might be seen as incompatible with communist ideology and practice in which nationalism is meant to be superseded by internationalism. The Marxist predication that national identities would disintegrate along with the state to be replaced by global solidarity failed to acknowledge the potency of nationalism. Many Western political scientists argued that communist governments had solved, or at least harnessed, the 'Nationality Problem' (Kellas 1991:106-8). But at the same time, 'Soviet-style economic growth wrought profound demographic, social, and environmental damage in Baltic Society' (Hiden and Salmon 1991:3).

How were nationalist movements developed and maintained in the FSU? The communist ideology imposed the principle of "socialist internationalism" on the republics of the Soviet Union and Eastern Europe whereby national interests were subordinate to international ones (the principle behind the 1968 Brezhnev Doctrine which justified Soviet intervention in Czechoslovakia). 'So although there may have been ethnic and national tensions in the region, they were largely hidden and repressed' (Mason 1993:132). The advantage of the Soviet system (for nationalist movements) was that the republics (in particular the Baltics) tended to be divided along national lines and were provided a formal government structure on which to build. This proved invaluable for nationalism under Gorbachev's more open system in the mid to late 1980s. An important condition in the development of nationalism is regime change which is particularly significant for explaining its sudden rise in the FSU and Former Yugoslavia. The political and economic changes of Gorbachev, although designed to increase economic efficiency, facilitated expression of political views and tolerated a

level of nationalistic behaviour previously repressed (Kellas 1991:107-9). Another advantage for the Lithuanian reformers was the fact that, by the late 1980s, 91.5 per cent of administrative or managerial posts were held by Lithuanians (79.6 per cent of the population) (Smith 1994:123). This was particularly useful in facilitating the transition from social movement to political force (see 4.3).

So for Kellas (1993), *glasnost* (openness) and *perestroika* (restructuring) provided the necessary condition for national identities to find political expression. Smith (1994:121) agrees, placing the beginnings of the Baltic Popular Fronts in Gorbachev's reform agenda. Breuilly, on the other hand, contends that national movements were a logical response to the breakdown of the USSR, refuting the notion that nationalism was waiting to be expressed when political controls were relaxed (Breuilly 1993:344). He also objects to the image of the USSR as a 'deep freeze' in which national identities were suppressed only able to thaw out after the freezer had broken down. He argues it is 'a modern construct and that it acquires political significance only under certain conditions' (Breuilly 1993:343). Breuilly suggests that nationalism was a post-breakdown phenomenon and that, rather than emerging from cultural identity, nationalism creates identity. Yet his discussion of how it developed points to factors which could be construed as national identity. For example, when discussing nationalism in the Baltics, he writes:

> The Baltic Republics were especially advanced in relation to the rest of the USSR. They had their own very recent memories of independence; well developed literary languages in a highly literate and well educated population; and were very open to the west....Everything - cultural identity, aspirations to greater political freedom, and economic self-interest - meant that the effect of the Gorbachev reforms was the rapid growth of demands for national independence, demands which came under the control of nationalist rather than local communist leadership (Breuilly 1993:347).

Although cultural identity and the existence of cultural systems such as language are not synonymous with nationalism, they do show that an identity existed prior to the nationalist uprising. Also, the fact that Breuilly can point to a nationalist leadership before the actual breakdown of the USSR, demonstrates the fluidity or dynamics of the relationship. The national movements of 1988-1991 could draw upon a rich variety of pre-Soviet national symbols derived from cultural heritage as well as more recent memories of statehood (Smith 1994:121). So, it could be argued that a cultural identity existed and this was expressed when the regime change provided the political

opportunity). As Kellas points out, 'it is the *changes* in political, economic and cultural relationships that give rise to nationalism' (Kellas 1991:65 - his emphasis).

The political, economic, and cultural consequences of the changes have, in turn, influenced the notion of national identity in Lithuania. The seeds of nationalism were there and the development of national movements was aided by the political changes but it can not be ignored that those national movements, especially in the Baltics, had implications for the future of the USSR. The national movements in the Baltics had gained Western support and although Gorbachev may have envisaged Western kudos for his more liberal reforms he most certainly did not expect the nationalist uprising which led to several declarations of independence, including, in the end, from Russia. It is debatable whether the Centre resigned itself to losing the Baltics, especially given the effective economic and military reaction to Lithuania's declaration of independence (Breuilly 1993:349), but the increase in Western attention is significant. Western knowledge, interest, and understanding of the situation was strongly linked to the resolve of the national movements who made their cause known throughout the world[6].

Kellas attempts to explain why national sentiment was waiting to be expressed when given the opportunity. While Breuilly focuses on politics (though not ignoring economics), Kellas looks at the economic and cultural connections with national movements. According to Kellas, '[n]ationalism feeds on economic discontent, and channels it into a nationalist perspective' (Kellas 1991:114). This is especially true where there is 'uneven economic development' regionally such as was the case in the FSU and FYR (Kellas 1991:114). The regional disparity in wealth distribution often has a cultural basis and, therefore, economic deprivation can be perceived to be connected with ethnicity. Thus, regions or republics might demand economic changes along national lines (see also 4.3).

Marxists take a reductionist view by linking the emergence of nationalism to a stage of economic development - the rise of the modern industrial or capitalist state. Kellas is less resolved to the primacy of economy, but nevertheless recognises the close connection between nationalism and

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[6] The West does not deserve much credit , however, given their slow response to recognition of the independence declarations and their apparent disinterest in the military invasion in Lithuania in January 1991 where 13 people were killed.

economic or material interests. A rise in nationalism can be related to the economic consequences of colonialism or 'internal colonialism' where the colonised have a nationalist reaction (Kellas 1991:61). This may have been a factor in Lithuania where control of the economic system was prevented by the internal colonialism of the FSU. It was believed by Lithuanian reformers that independence from the integrated communist economic system was in the interests of the Lithuanian nation, including its economy and environment (see 4.3-4.4).

The revolutions in Eastern Europe in 1989 intensified nationalism in the Soviet Union, leading to declarations of independence in five republics, including Lithuania, by March 1990 (Mason 1992:133). Nationalism has continued to affect political and economic decisions in Lithuania since independence regardless of the political affiliations of those in government. The new catch-cry, and thus rationale, for many decisions of the first independent government (*Sajudis*) was, 'this is for the economic independence of Lithuania'. This argument has been used to rationalise several decisions in order to obtain popular support. It appears that nationalism was behind the government's goals of retaining political independence and regaining economic independence but this could have adverse effects in terms of both economic recovery and environmental protection. Similar arguments were taken on board by the Democratic Labour Party (formerly the Communist Party) which won office in 1992 (see 7.2.1.2). Lithuania has already shown signs of avoiding co-operation with other countries (particularly ex-Soviet republics regardless of whether they are CIS members or not, such as Latvia and Estonia) which will be to the detriment of the economy and the environment. For example, the argument espoused by government in favour of the proposed Oil Terminal, discussed in Chapter 2, was that it was needed in order to re-build the Lithuanian nation.

Economic reconstruction is an important part of Lithuania's recovery and the success of the government's predecessors in the 1930s could provide some basis to counter claims that the Baltic republics cannot survive on their own (Hiden and Salmon 1991:78). However, what must also be considered is what was sacrificed in the name of economic progress. Hiden and Salmon (1991:56) noted that all three nationalist dictators successfully drove their economies down the road of modernisation but only at the expense of their respective minorities. There is other information which suggests that, while acknowledging the authoritarian nature of the regimes

and the problems associated with them, support for minority education continued. The minority government under Prime Minister Slezevicius, had introduced egalitarian, tolerant policies on the basis of the 1922 constitution including further expansion of Polish schools (Hope 1994:62). This was one aspect of the increasingly secular and non-Lithuanianness of the constitution which eventually led to the authoritarian take-over. One reason for the nationalists' dissatisfaction with the egalitarian approach was that Poland was closing Lithuanian schools in Vilnius ("belonging" to Poland at the time) and to accommodate the Poles in Lithuania therefore amounted to treason (Lieven 1993:66). The somewhat less tolerant approach of the Smetona government, designed to emulate the growing economic and cultural power of Germany, led to the closure of several Polish schools (Hope 1994:62-4). Whilst those years could be seen as politically and socially unsound, minority language instruction remained partly or entirely subsidised by Smetona and his government actively supported the influential Jewish community (Hope 1994:64). Yet, according to Adam Michnik, founder of the Polish Workers' Defence Committee:

> nationalism always leads to egoism and self-deception. To egoism because it allows one to ignore the injuries suffered by other nations and disregard other peoples' values and ways of seeing. To self-deception, because by focusing on one's own injuries, nursing the memory of those injuries, nationalism allows one to ignore the injuries one has also inflicted (quoted in Mason 1992:132).

It is important that the nationalism that had the positive effect of regaining independence does not turn in other directions as in most of Eastern Europe where it has become divisive and destructive. The Lithuanian Nationalists, headed by Rimantas Smetona, proposed a referendum in 1994 to terminate the government of the Democratic Labour Party, demonstrating the possibility of a revival of nationalist principles. However, together with their only supporters, the Democrats, they held just six seats in the 1992-1996 parliament (Baltrusaitis 1994). At the 1996 elections, the Lithuanian National Union and Young Lithuania Nationalists gained one seat each (see 7.2.1.4).

In post-industrial societies, emphasis is shifting away from class or materialist issues toward post-materialist values of quality of life such as the environment, civil rights, and culture. Such a shift is facilitated by the economic and physical security of post-industrial countries (Kellas 1991:66). Perhaps a feature of these societies is not just industrialisation but a well developed democratic political system that delivers a large measure of

individual safety and protection of rights. When citizens no longer feel economically or physically secure and are not adequately protected by the state, nationalism within a state can also develop as groups seek their own protection. This nationalism is more likely to be violent if people are not protected by the state and participative institutions are weak or few. Such a situation is evident in FYR where fear of one ethnic group gaining more than another has led to a domino effect in violent action (Ignatieff 1994:16 and Kellas 1991:112). Areas with a history of self determination, such as the Baltic Republics, are more likely to use constitutional action. They have used methods such as mass demonstrations, 'illegal' declarations of independence, and economic sanctions much of which have avoided violence (Kellas 1991:112).

Class or economic divisions in Lithuania are beginning to become evident since the restoration of independence, with the cleavage between rich and poor increasingly obvious. There is some antagonism toward those who have succeeded in the new market economy since the number that have done so is small. Nationalism in Lithuania tends to transcend these economic divisions, although successful business people are usually perceived to be associated with Russian Mafia. Economic problems are still blamed on the Soviet system or, more precisely, Russia. Although Lithuania has not yet developed a high degree of economic security and Mafia crime seems to defy legal structures, the history of self rule is a basis for developing these areas and continuity with their ancestors aids cultural homogeneity.

4.2.2.4 Nationalism and Culture

'Primordialists' have argued that nationalism is based on a 'natural' instinct while others, like Kellas, have suggested that 'nationality and culture are almost synonymous'; that many of culture's attributes are national' (Kellas 1991:67). Yet it is problematic to see them as the same. Indeed, culture is an integral part of national movements but cultural identity need not be expressed as nationalism. Nevertheless, it would be inappropriate not to discuss the role of culture in the development of nationalism.

Culture, often stemming from ethnicity, is thus an important feature of nationalism. Culture is often a crucial part of national identity which produces a sense of commonality that members might seek to preserve. According to Kellas (1991:70):

> Any nation whose identity is based on language, religion, education or the Arts, and which is faced with threats to its culture, is likely to react with nationalism.

Lithuania could be seen as one such nation. Lithuanian is an ancient language - the closest living language to Sanskrit - related only to Old Prussian (no longer spoken) and Latvian. It is, therefore, an important language for linguists. The printing of books in the Lithuanian language was prohibited by the Tsars and, under the Soviets, it lost its official language status to Russian. Its uniqueness has meant that the Lithuanian language has become an extremely important part of national and cultural identity. The right to give national languages official status was generally granted to the Republics in 1989, although Russian was expected to have equal status. During the Soviet period, 'national flags and anthems were banned, until Gorbachev, but education in the native languages was never eliminated' (Kellas 1991:110).

Religion is a major part of cultural identity and the official or state religion is often subject to politically-driven change. As the last country in Europe to be Christianised in 1383, pagan practices clandestinely persisted for around four hundred years with groups still existing today. Lithuanian paganism was organised and 'confronted the social, political and spiritual challenge of the Christian churches with considerable success' (Hiden and Salmon 1991:12) (see 4.2.1 and 4.3.2). Catholicism was to eventually become integral to the modern Lithuanian identity. During the early stages of Lithuanian nationalism in 1863, 'religion and nationalism formed a symbiotic relationship', with the Catholic Church leading the campaign against russification (Hiden and Salmon 1991:19). Later, in the early 1900s, 'the catholic clergy continued to take a lead in cultivating the Lithuanian language and coordinating resistance to Russian policy' (Hiden and Salmon 1991:20).

During the independence years, the Catholic Church had a mixed relationship with nationalism and Lithuanian politics. There was some conflict between the Vatican and Lithuanian Church leaders when the church recognised the State in 1922 but did not create a Lithuanian church province. In Lithuania, the clergy regarded political pluralism valid as long as chosen parties were behind the church. The interaction between the church and politics led to a 'polarisation of party-politics around religious and ideological issues' (Hope 1994:50). The Vatican was also hostile towards the minority government of Populists and Social Democrats because it excluded the Christian Democrats and had begun to introduce policies based on an egalitarian and secular

constitution (Hope 1994:50). The tension between the secular and religious spheres of society influenced the eventual dissolution of parliament that led to the formation of a Presidential system (Hope 1994:62). So, the Catholic church has not supported Lithuanian nationalism at all times, but when it has (such as the changes in 1926) it has done so at the expense of the development of democratic pluralism which has become the cornerstone of free societies. Nevertheless, religion remained a focus for cultural and national identity, particularly during the era of Soviet occupation and secession from it.

In 1960, when nationalism was beginning to fade in politics, Emersen noted the interrelationship between the state and religion:

> Within the state the independent church, or the presence of several churches, acted in the Western world as a safeguard against oppression. Now...religions everywhere have been so strongly absorbed into the nation that religious leaders bless its arms and pray for the destruction of its enemies (Emersen 1960:169).

Catholic identity certainly played an important role in the late 1980s in the fight for cultural, political, and economic independence. This could not be demonstrated more clearly than by the presence of the national flag in the Vilnius cathedral after it was returned to the Catholic Church in February 1989 (Forest 1990:116). Earlier, the Church had also combined the national symbol with a religious ceremony at a mass to celebrate the "return of the flag" when the national flag was raised above the remaining tower of Gediminas' castle in October 1988. A flag was also hung from the window of the Dawn Gate - an entrance to ancient Vilnius and a sacred place for Orthodox and Catholics[7] (Senn 1990:201 & Forest 1990:115). Another example of such mixed symbolism is found in the placement of a statue of the Madonna outside parliament in Vilnius to commemorate the fight to retain power in January 1991 when Lithuanian citizens protected the parliament and media outlets from oncoming Soviet tanks and which led to the deaths of thirteen people. The Madonna remained there (together with other commemorative pieces such as a tribute to Iceland the first nation to formally recognise Lithuania's independence) until December 12, 1992 when the acting President at the time, Algirdas Brazauskas, ordered its removal (*The Baltic Independent* 1992, 3(141):1).

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[7] Above the gateway is a small chapel housing an icon of Mary the Madonna which is crowned in gold and is believed to have cried the day Soviet troops entered Lithuania in 1940.

The link between the Catholic Church and the Lithuanian Freedom League (also translated as Lithuanian League for Liberation) was strong with the fight for religion seemingly synonymous with the fight for independence. The LFL was seen by authorities and some members of *Sajudis* as 'extremist' and 'nationalist'. The League tried to identify itself with the Church while the same could not be said of *Sajudis* (see 4.3.3.3). LFL's link with the Church was symbolised by the positioning of the hunger strike of several weeks outside the cathedral in Vilnius. Also, one of the leaders in the League, Nijole Sadunaite, tended to be seen as a Catholic rather than a political dissenter. She had been one of the key people behind the *Chronicle of the Catholic of Lithuania* which functioned as an underground newspaper during the Soviet period. The Church, however, was cautious about connecting itself with any political movement once the government began to show a willingness to deal directly with Church officials (Senn 1990:69-70). At the same time, many of the general population of believers had

> seen the Roman Catholic Church's struggle for survival in the land as a part of their own national consciousness; the church had provided an institutional alternative to the Soviet order' (Senn 1990:8).

The Church has continued to align itself with authoritarian-tinged nationalism which stems from Church conservatism in general, particularly since it was insulated in the Soviet Union from reforms in the Vatican (Lieven 1993:366).

Today, the Lithuanian identity appears to be an incongruous mixture of strong Catholic faith - a bastion against East and West - and an identification with the pagan ancestors who, though surrounded by enemies, were never vanquished. In both perceptions, Lithuania is seen as a fortress against the outside world, a perception which has obvious roots in Lithuanian history and which has led to an extreme sense of defensiveness (Sinnig 1992). Interestingly, the oppression of Catholicism under soviet occupation led to a renewed interest in "folk culture" which was tolerated as a potential counter force to "bourgeois" culture. The cultural folk groups thus became an alternative to practising religion and were used by their leaders to maintain the national consciousness of the Lithuanian people (Samalavicius 1994:73).

This focus on "folk culture" gave a sense of national identity and later, paradoxically, became clearly linked to the Christian religion, with the same people welcoming back the Church into their lives as a uniting force against

communism. The Catholic Church stood firm against the atheism of the Soviet Union as well as the secularist West. Speaking at the famous rally on August 23, 1988 in Vingis Park (the 49th anniversary of the Molotov-Ribbentrop pact), a Catholic priest called on those present to 'join him in decrying the sins of the modern world' (Senn 1990:126).

An example of the mixing of Catholic and medieval pagan heritage is found in the inauguration ceremony of Algirdis Brazauskas as President in 1993. The two hour rite of passage played heavily on Lithuania's medieval history and the heroes of that time such as Grand Duke, Vytautas under whose rule the Grand Duchy of Lithuania stretched from the Baltic Sea to the Black Sea. A Presidential flag was introduced and installed on Gediminas hill, the site of an ancient pagan altar. The procession and service took place in the Cathedral of Vilnius and was presented by three priests and a representative of the archbishop (Sinnig 1993:8). Such events are also indicative of the role pagan ancestry has played in Lithuania's obsession with symbolism and ceremony. This kind of 'ritualisation' of politics is part of a 'retraditionalisation' of life, although partly influenced by Soviet culture which was highly ritualised and aggrandised (Lieven 1994:25, 28).

The era of pagan dukes and the era of the Catholic Church are a part of Lithuanian heritage and both were part of the movement which secured independence in 1990/1 and are behind the strong desire never to be conquered again, particularly by atheist Russia. The "fortress mentality" tends to portray the country as a 'classic picture of the notorious narrow-minded arrogance of the small nations of Central and Eastern Europe' (Sinnig 1992). Yet Lithuanian heritage is rich and complicated. Time and outside influence has begun to dismantle that fortress, challenging the archaic culture (Sinnig 1992).

Hundreds of years of occupation (particularly by Tsarist Russia, 1795-1914 and later the Soviet Union, 1940-1990) actually strengthened this identity since the people struggled to hang on to the culture that made them different as the Soviet system attempted to make them the same.

> The regime's pressures for atheistic education, combined with its policies encouraging assimilation, gave the church a special mission as a repository of Lithuanian national feeling under Soviet rule (Senn 1990:66).

Catholicism thus became a symbol of what the Soviet Union denied the

Lithuanian people while faith in God gave people the strength to continue. So 'when Gorbachev opened up the Soviet system to nationalist demands, language and religion became a focus for nationalism in the politics of the Republics' (Kellas 1991:111).

If Catholicism has symbolised Lithuanian national culture, the re-emergence of secularisation in Lithuania (particularly amongst youth) could signify the diffusion of nationalist feeling and a more pluralist notion of the Lithuanian state. The rising numbers in sects such as 'Krishna Consciousness' and 'Word of Faith' as well as the growing interest in paganism (see 4.3.2) has concerned traditionalists. The Lithuanian constitution of 1992, under clause 43, gives support to religions which have been active in the country for over 400 years - Catholic, Lutheran, Old Believers, Reformed, and Orthodox churches. Others are tolerated if their activities fall within the law (*The Baltic Independent* 1994, 4(199):2). Some would argue that this hardly constitutes 'freedom of religion', however, the growing membership of denominations outside the traditional churches (especially the Catholic church), along with those now professing atheism or agnosticism (from choice rather than force), demonstrates its ailing power in society and perhaps the beginning of a diminishing role in national identity.

Cultural or social nationalism appears to be on the rise around the world. This indicates the increased importance of culture in the 'economy + politics + culture = nationalism' equation. Kellas argues that this is due to the pursuit of 'psychic income' (quality rather than materialism) in post-material societies. Thus issues of environmental protection and human rights become the focus of political conflict. Also, the development of the media and mass publications have aided the spread of cultural nationalism (Kellas 1991:67-70).

Is this the situation in Lithuania? While it seems certain that cultural nationalism was a significant factor in the national movement in Lithuania, events since independence present a slightly different view. The environment, culture, and human rights were at the pinnacle of the political agenda in 1990 at the first free elections since the declaration of independence. However, as Chapter 5 discusses, materialist issues have now come to the fore. It could be argued that Lithuania is not a 'post-materialist' state and that the shift discussed by Kellas is only relevant for nationalism in advanced 'post-materialist' societies (see also 4.3). Cultural and national identities are constantly being reaffirmed in Lithuania through the media, however,

economics and materialist aspirations have become the primary focus of political conflict. Media was particularly important for promotion of national identity during the early formations of the nationalist movement. They provided a republic-based focus on issues and events which was significant in providing a national context for concerns and debate (Smith 1994:128).

It is not easy, or indeed beneficial, to make generalisations about nationalism in the Former Soviet Union because of the cultural differences between the nations. The Soviet Union consisted of many minority nations. 'Each of the country's 15 constituent republics represented a different nationality, and the Russian republic alone contained over 100 nationalities' (Mason 1992:133). Many minority nations feel that their culture is threatened by the state which usually represents the majority nation or a constructed state culture. This fear can culminate in a sense of 'relative deprivation' which can be political, economic, or cultural and is important in explaining nationalist behaviour (Kellas 1991:69). Republics with a strong cultural identity such as Lithuania felt this deprivation on all levels under the Soviet system. Economic and political deprivation under the command economy were noted in the previous section. Cultural suppression is equally, if not more, significant. Part of this suppression came in the form of migration of non-nationals (particularly Russians) into the republics for work in Soviet enterprises. This was an element of the 'Sovietisation' process which aimed to replace national identities with the international Soviet identity. This tended to happen more in the better-off Baltic Republics. But as discussed earlier, the Baltics are not innocent of ethnic intolerance. The ethnic balance in Lithuania has meant ethnic tensions are now relatively few, however, would it be the same if the balance had shifted greatly during the occupation years?

As Kellas points out, migration can upset the ethnic balance, as it has in Latvia where Latvians constitute only half of the total population (Kellas 1991:113). While Kellas points to the shift toward ethnic and cultural nationalism away from cosmopolitanism or official nationalism, Karklins (1994) proposes pluralism as the only political structure able to resolve ethnic tensions. Pluralism is also advocated as crucial for environmentally sustainable society, even if it means risking the democratic election of parties who are against environmental protection (see 7.2.2).

The methods used by separatist republics to achieve independence have

varied. Kellas (1991:110) notes that some Republics, 'such as Lithuania, appeared impatient, while others, such as Latvia and Estonia, seemed prepared to compromise on independence in the short-term'.

Senn offers the opposite view and asserts that Lithuanians tended to be slow to act, at least at first, compared with Estonia. Western observers, he notes, spoke of their cautiousness and determination not to step over the bounds of official toleration (Senn 1990:56). Hiden and Salmon argue that although Estonia and Latvia were more modern and more sophisticated in their approaches, Lithuania mounted a more direct challenge; that Lithuania was portrayed by the West as headstrong while the other two Baltic states took a less confrontational path to independence (Hiden and Salmon 1991:127 & 163). There were cultural differences in the nations, which led to different nationalist movements, and also 'between their relationships with the USSR' (Kellas 1991:110).

4.2.2.5 Nationalism and the Environment

Environmental issues were brought abruptly onto the Soviet political agenda following the accident at the Chernobyl Nuclear Power Plant in April 1986. The accident had serious repercussions for the Soviet political system firstly by bringing ecological issues onto the Soviet agenda and secondly by triggering the process of democracy through public discontent over the secrecy surrounding the accident. It also dramatically alerted the international community to the state of the environment in the region (Nørgaard and Pedersen 1994:98-99). As Chapter 2 demonstrates, the issue of nuclear power production has continued to be a focal point for environmental groups in Lithuania. The eventual collapse of the Soviet Union brought the environment onto a much higher platform. Environmental issues were handled within new administrative structures and were, necessarily, in competition with other priority issues such as state building and ensuring the economic viability of the country (Nørgaard and Pedersen 1994:98-99). Concern over the latter issues has dominated the political agenda since independence.

What affect has Lithuanian nationalism had on the environment? Nationalism can have positive effects for environmental protection. The desire to protect the nation's territory can be strong. In the early years of independence in Lithuania, it was common to hear comments such as 'look

at *our* nature' and 'see how beautiful *our* nature is' from those who were not particularly involved in nature conservation (pers. obs. July-Dec. 1992).

> Prior to *glasnost*, overt expressions of nationalism were rare, and complaints against environmental degradation were generally voiced on behalf of biosphere protection or economic efficiency, rather than on behalf of "our republic" or "our people" (Pryde 1991:256).

At the time of secession, the perception was that environmental problems were caused by the policies of the central planners and that an independent nation could, and would, utilise their resources more efficiently and protect their nature more adequately. It is rather like the notion that one looks after one's own home with more care than a rented home or that of one's neighbour. This tended to be one of the influences of Green support in the late 1980s (see the following sections). Thus, much of the environmental debate in the FSU was conceptualised in terms of "us" verses "them", 'engendering a "not in my backyard" mentality that became reinforced by sentiments for political autonomy and economic autarky' (Peterson 1993:222). In such a way, environmental issues became a focus for political and economic independence. In this period, oppositional politics tended to be mobilised against certain developments and was always linked to a national concerns. Thus, protests tended to be issue-specific, focusing especially on those projects with environmental implications (Smith 1994:129). So, while protests appeared environmental in nature (such as opposition to phosphate mining in Estonia, and the expansion of the chemical industry in Lithuania), they often had other nationalistic motivations such as opposition to associated issues such as immigration of Russian workers (Lieven 1993:220). As Peterson (1993:215) points out, 'environmentalism often was couched in a broader anti-Russian feeling'.

In July 1988, a protest involving cycling around the republic (a method that was to become popular in the Green Movement) promoted an environmental message through a national slogan - 'Lithuania My Home' (Senn 1990:94). In effect, environmental deterioration 'fanned the embers of ethnic nationalism' (Pryde 1991:254). Later, in September, Lithuanians participated in forming a human ring around the Baltic, extending from Scandinavia, through Poland and the Baltics. The ring was a sign of concern over pollution in the Baltic Sea. Participants waved the national flag and sang traditional folk songs. 'Once again concerns about ecological problems evoked feelings of national solidarity' (Senn 1990:139). As discussed above, national sentiment is also at the root of environmental concern, indicating that a somewhat of

an interdependence.

It is important to note that environmental issues can bind nationalities. Often problems are local and citizens of all nationalities may come together in protest. However, nationalistic protests are more likely to occur in cases of transboundary issues (Pryde 1991:259). Environmental protests in Lithuania were not only about transboundary pollution (coming from other republics) but also local problems were, in effect, transboundary in that they originated from decisions made outside the republic. Transboundary issues, such as pollution of the Baltic Sea have, at times, been a focus for international co-operation (see Chapter 3). The famous protest in 1988 when people from Estonia, Latvia, and Lithuania gathered on the coast to protest against pollution, for example, demonstrates how a transboundary problem can unite affected nations. Yet this protest was directed against a common enemy - the Soviet Union. Another protest (the fiftieth anniversary of the Molotov-Ribbentrop pact) involved a human chain (linked by hands) extending from Lithuania to Estonia - again directed at Moscow. The co-operation shown at such combined Baltic environmental protests impressed Western observers, yet such cooperation seems unlikely to be repeated now the Baltic republics have regained independence. Environmental co-operation in the Baltic Sea area has involved several other nations but, as discussed in Chapter Three, national sentiment can be a hindrance to such co-operation. So while nationalism can be a positive force in environmental protection, it can also limit co-operative arrangements. As Fisher has noted:

> the association of environmental and national concerns had both a benefit and a cost. It enhanced the importance of the environmental issue at the time; on the other hand, as soon as national questions could be articulated elsewhere, attention was quickly diverted away from the environmental issue (Fisher 1992:7) (see 4.3.4.1).

Environmental concerns were fuelled in 1988 when the Soviet press (*Tiesa*) announced plans to expand the industrial complex in the Lithuanian cities of Kedainiai, Jonova, and Mazeikiai. This raised environmental and national concerns. Such development would mean increased air and water pollution as well as the likelihood of renewed Russian immigration of 'technical experts'. The large percentage of Russians working in many polluting industries was thus a contributing factor in opposition to their establishment or continued operation. 'Ignalina' and 'Snieckus' (now Visaginas - see Chapter 2), for example, became code words for the nationality problem (Senn 1990:58 & 64). In addition, such enterprises were designed to produce for large areas

of the Soviet Union and were, therefore, not in the economic interests of Lithuania (see also 5.4.1 and 5.4.1.1).

It is yet to be proven that an independent nation protects its nature any better than a foreign government. To be sure, evidence of colonial activities around the world demonstrates that such a political structure is not often favourable for the colonised. Lithuania has developed a comprehensive system of nature protection (such as National Parks, strict reserves, and Historical Parks) accounting for approximately 10 per cent of its total area (see 7.4.1.1 and 7.4.1.2). This is a promising start but implementation of the system will be the key. In addition, such measures are only really beneficial if other policies do not counteract benefits or utilise all available funds (see Chapters 5 and 6). As discussed in the oil terminal case (see section 2.3), environmental protection is claimed to be limited by economic problems, yet political decisions (influenced by national sentiments) are sometimes made at the expense of both the environment and the economy (see also 7.2.1).

National sentiment, whether based on nostalgia or a sense of cultural identity, has been the impetus for large-scale political, economic, environmental, and social reform in Lithuania. It mobilised large sections of society throughout the region to effect change from below. There were also several changes from above which facilitated the success of these social movements. Their success, particularly in relation to environmental issues, demands examination in order to establish the role of "people power" in effecting change and to ascertain the future directions of the movements post-independence. This is important in uncovering whether an environmental sustainable society will emerge. In particular, such an examination should indicate whether environmental issues have retained their position of importance on the political agenda and whether the Green Movement has retained both its attraction to mass society and its ability to influence political developments.

4.3 **Social Movements**

Social movements become possible when:

> there is a revision in the manner in which a substantial group of people look at some misfortune, seeing it no longer as a misfortune warranting charitable consideration but as an injustice which is intolerable in society (Turner 1969 quoted in Wilson 1973:90).

Large scale social movements which challenge the institutional establishment are relatively rare events. Such mass social movements 'always involve networks or 'bundles' of movements rather than a single-issue or concern-specific group' (Pakulski 1991:xi). They constitute systematic efforts to effect change in thought, behaviour, and social relationships (Mason 1992:107). Pakulski (1991) has sought to set limits for the definition of a social movement which has, at times, included all forms of social action. He thus defines a social movement as 'a recurrent pattern of partially institutionalised collective activities which is anti-systemic in its value orientation, form and symbolism' (1991:32) Mass social movements are those that achieve a high level of support. The Lithuanian reform movement (incorporating the Green Movement) can be seen to fit well with this 'middle-range' definition.

The reform movement in Lithuania, at first glance, appears to have functioned in the name of a single issue; independence, but associated with this were a number of issues relating to political, economic, and cultural freedoms. Support, while coalescing around the aim of independence, was based on a vast array of concerns, including environmental degradation. The extent to which mass support was obtained is related to this 'fusing' of social movements that essentially had a single aim (independence) and a single enemy (the Soviet Union) whilst holding alliances to various other objectives. This fusing not only explains mass support but it also explains why the reform movement tended to dissipate on achieving independence (see 4.3.4 and 4.3.4.1). Regardless of the fate of movements like *Sajudis*, they will always 'leave the social landscape changed' (Pakulski 1991:xi).

There have been a number of approaches, incorporating various assumptions, in social movement theory. These include 'collective behaviour', 'mass society', 'resource mobilisation', 'revolutionary', 'post-materialist', and 'new social movement' approaches. They are adequately reviewed by Pakulski (1991). The number of approaches is not surprising given the array of public activity seeking change which might be considered a social movement. Generally, these have not been applied to the communist region which, argues Mason (1992:106-7), has left a large gap in knowledge and understanding about the development of social movements in these systems. The theories go some way toward explaining the development of social movements in Lithuania and other post-communist countries and are, therefore, useful in understanding the importance of their role and the factors involved in their success and failures. The Lithuanian Reform Movement (incorporating the

Green Movement) has displayed elements of several of these theories, indicating that they are not all-inclusive approaches.

For example, they have displayed elements of the 'collective behaviour' theory (see Smelser 1962) whereby social movements develop as rational responses to abnormal conditions or structural strain, ultimately leading to social dysfunction (Pakulski 1991:5). Mason (1992:107) points out that collective behaviour is not equivalent to a social movement, stressing that 'if collective behaviour is to achieve social change, it must transform itself into a social movement'.

Other social movement theorists (Durkheim, Fromm, Arendt, Kornhauser) have taken a 'mass society' approach which views social movements as non-rational and non-institutional responses to social malfunctions or pathologies (Pakulski 1991:8). The mass society approach has come under increasing criticism for its sharp distinction between rational, conventional politics on the one hand and emotive, unconventional behaviour on the other, particularly since such distinctions are not so definite (Pakulski 1991:9). There are also problems in defining rational or irrational behaviour. Some aspects of the theory can be extrapolated and applied to the Lithuanian case. For example, certain aspects of the reform agenda in Lithuania, such as nationalistic tendencies and mass rallies of 'unconventional' behaviour, might be construed as non-rational and non-institutional but, in general, the fight for secession involved rational goals and was based, at least partly, on institutional means (using existing government structures and election processes).

'Resource mobilisation' theorists have taken a more general approach to social movements, seeing them as an extension of the so-called conventional and rational forms of institutionalised politics. They are seen to use both conventional and unconventional means of action and rather than being a response to strain or deprivation, they are seen as innovative groups which create and utilise new political resources and opportunities. Grievances are only secondary. Thus, they are not symptomatic of dysfunction but of democratic openness and vitality (Pakulski 1991:12-3 and Mason 1992:108). On its own, such an approach is not appropriate for understanding the development of the reform movement in Lithuania. It is more useful for understanding movements which have developed from within modern liberal democracies. However, its emphasis on the way in which movements

can seize an opportunity to express desire for change can be extrapolated to highlight the way in which leaders (of *Sajudis* and the Greens) took advantage of the Gorbachev reforms in a calculated and purposeful manner (even if their ultimate achievements were not the focus of their original aims) (see 4.3.3).

Reform in Lithuania and the rest of the region has often been referred to as a wave of relatively peaceful revolutions. From a sociological point of view, revolutions break under conditions of mass deprivation. From the 'revolutionary' approach, social movements are seen, to varying degrees, as forms of revolution. The difference lying in scope and intensity of the response. The key events in this approach are mass activity such as riots and protests as well as possible violence or unrest which occurs as a response to tension or strain in society. Discontent is seen to accumulate within society until such time that large sections of the population are mobilised and discontent is expressed in violent political action (Pakulski 1991:11). Lithuania might be said, from this perspective, to have undergone a peaceful revolution. Indeed this term has been used by Mason (1992) and Peterson (1992) to describe the process of transition in the former communist bloc. Mason (1992:111-2) has argued that the relative acceptance, amongst communist leaders throughout the region, of defeat as inevitable was a major reason for their non-violent success. However, such an approach is inadequate in that it cannot account for all the intricate processes which were occurring as part of the change.

More recent theories have focused on the post-modern world in which 'new values' have come to the forefront of political and social life. The new values represent an emerging 'alternative paradigm' which can be seen as the Green agenda, incorporating other recognised movements such as peace, feminism, anti-nuclear, equality, and indigenous rights. Inglehart points to the political and economic stability of the post war era (1945 onwards) which enabled people to embrace 'post-materialist' or 'soft' values which were not associated with basic needs but, rather, with creativity and self-realisation. It is argued that these values have, in turn, led to the development of social movements which aim to secure change in those areas of social, economic, and political life. A fundamental criticism of Inglehart's approach is that these values are not actually new and that there has merely been an awareness and re-emphasis of some values in society as others have been secured (Pakulski 1991:18-20).

This approach seems irrelevant to the Lithuanian case, given that Soviet society was closed and shielded from developments in the first world where the opportunity arose to express concern for 'post-materialist' values. However, the fact that such perceptions were changing in the West, where a higher value was generally placed on social justice, freedom of expression and association, democracy, environmental protection, and self-determination, was an important factor in secession and reform. Communication with Western counterparts in the early days of reform provided information, incentive, and support to the social movements of the communist region. Baltic environmentalists in particular strengthened contacts in the West through participation in regional conferences such as those regarding the clean up of the Baltic Sea. There was also an active emigré community supporting the aims of the movements. The more open media in the region was a particularly important resource for social movements (Mason 1992:110 and Peterson 1993:223). Yet, the basic tenet of the value paradigm sought by Lithuanian reformers was not new. While it included notions of environmental degradation, this had more of an instrumental than a moral value. The committed and most active Greens, however, pursued issues of peace based on anti-nuclear and anti-military principles, demanding the dismantling of Soviet bases (Balbierius 1992:3). While materialist values tended to overshadow 'post-materialist' concerns such as environmental degradation in the years following the restoration of independence, there are reasons other than the insecurity of basic requirements which have led to a decline in environmental concern and activism (see also 4.3.4.1, 7.2.2.3 and 7.2.3).

New interpretations of mass activity have been labelled the 'new social movement' approach and are discussed in terms of 'new politics'. These new movements are typically anti-statist and are sceptical of ideological blue-prints. The approach is a combination of earlier interpretations, incorporating aspects of the 'collective behaviour' approach such as locating causes in the structural conflicts of society. Causes are found in the sociocultural sphere not in class conflict (Pakulski 1991:25-7). Unlike 'collective behaviour' accounts, the new social movement approach sees mass social action as rational, as forming new identities, reviving and expanding civic society. The historical roots of the movements are also emphasised. 'In this sense, they constitute 'healthy' responses to 'pathological' situations' (Pakulski 1991:28). In this regard, the Lithuanian reform movement (like Solidarity) could be interpreted according to such an approach since it was a response to

a structural problem pursued, to some extent, through rational means. Yet the approach has been criticised for ignoring traditional methods of social movements such as lobbying and petitioning (Pakulski 1991:29). Lithuanians utilised conventional methods of dissent as well as methods usually considered radical such as anti-state protest rallies.

Like Solidarity, *Sajudis* and the Greens developed under conditions of 'relative deprivation' while modernisation had led to the creation of a more complex social, political, and economic environment in which there was more opportunity for action. The groups seized such opportunities and utilised available resources, including the existing institutional arrangements. It can be seen that the theories of social movements can be applied to the communist region and offer some assistance in understanding their emergence and subsequent activities. Relative deprivation was an important factor in the emergence but resources were required to enable them to acquire the momentum necessary for change.

For the Green movement (in the West) there has been tension between the radical change that the movement seeks and its reliance on conservative means of bringing it about. In Lithuania, it could be said that radical change was met with radical means alongside some other more conservative means such as gradually increasing influence in the parliament. *Sajudis* and the Greens were successful in their primary goal of independence by use of such means but are faced with a more difficult task post-independence (see 4.3.4.1). Radical action has decreased along with the downturn in participation (Dobson 1990:25) (see also Chapter 7).

Whatever approach is taken, it can be said that social movements arise in opposition to something or someone and, in such a way, have an identified enemy as the focus of their discontent. 'The basis of movement unity ... rests on what participants are against, rather than what they are for' (Pakulski 1991:38). They have a vision of a common enemy (Mason 1992:113) but they also act in a positive way, presenting programmes and suggesting solutions (Pakulski 1991:45). Thus, social movements can be dynamic, changing and adjusting to suit certain situations as they work toward achieving their goals. Few, however, enjoy the feeling of having completed their aims and contentedly disband. Thus, 'frustration is the fate of all social movements' (Wilson 1973:360).

The development of the Lithuanian reform movement, based on national sentiment, can be divided into three main stages; a period of reawakening (1986-8), the emergence of nationalist movements as Popular Fronts (1988-90), and formal institutional support for territorial secession (Smith 1994:128).

Sajudis initially declared itself a 'movement, a wave, which will disappear when its mission is accomplished' (Senn 1990:78). At that stage, its "mission" was to make the Communist Party of Lithuania act on the idea of *perestroika*, thereby bring more political and economic autonomy to the republic, along with cultural freedom. Solidarity also constituted this kind of 'self-limiting' revolution as it too initially sought to reform, rather than overthrow, the communist regime (Mason 1992:110). Events were to change both the mission and the future of the movement as the reality of independence came into view.

In accordance with the theory of revolution discussed above, *Sajudis* developed a formal organisational structure and was eventually successful in achieving its later aim of political independence from the Soviet Union (see 4.3.3, 4.3.3.1 and 7.2). By the 1992 elections (at which they were defeated) the group had become known as *Sajudis III*. It could be argued that the formal organisation of *Sajudis*, while important in terms of achieving those goals, ultimately undermined the nature of the movement. Pakulski (1991:42) points out that this is the tendency when a social movement becomes revolutionary. As the organisational structure develops and more concrete goals are established, the social movement becomes more heterogeneous, facilitating its dissolution as supporters become less interested (Mason 1992:113) (see 4.3.4.1). *Sajudis* became a political structure rather than a social movement.

The restoration of independence, however, its not only a result of the efforts of social movements. While they certainly had a primary role in de-legitimising and de-stabilising authority, important factors leading to the achievements came from events in Moscow where Gorbachev's authority was being tested. The movements also needed to obtain some measure of support from key personnel within the political elite. Mason (1992:111) contends that in all the Eastern European countries, there were reformists within the communist parties who supported, to a greater or lesser extent, the abandonment of single-party rule. In addition, institutionalised methods and organisations, including actions of the existing Communist Party of

Lithuania, and a more open electoral process which allowed other parties and groups to seek representation in the Supreme Soviet, contributed to the final outcome. Since these achievements, a dissolution can be observed and, in order to maintain itself as an organisation, the focus of the group had to change again. The relatively peaceful acceptance of the movements' aims by Central authorities also reduced any perceived need for violence[8]. The peaceful protest action trend spread throughout the region (with the help of media) and 'each successive nonviolent victory added to the store of experience' (Mason 1992:113).

However, *Sajudis* has not disbanded altogether. Although several groups and political parties have arisen from its ranks, *Sajudis* still exists in Lithuania as an umbrella organisation. There was still a role for the Reform Movement in Lithuanian politics, particularly when the Lithuanian Democratic Labour Party was in power, pursuing a different vision of Lithuania than *Sajudis* had prognosed. The vision of a better world held by the Reform Movement mainly focused on ridding Lithuania of 'communist influence' and in that way, the goals were not significantly different within the post-*Sajudis* camp. Many members would have felt frustration in seeing their hard work for independence "end" in the election of former Communist Party chief, Algirdas Brazauskas as President in 1993, yet a second chance for the *Sajudis*-derived party, the Homeland Union, was provided at the 1996 national elections at which time they attained 70 seats in the 141 seat parliament (see 7.2.1.4).

The following sections will look more closely at the emergence and development of the Green Movement and *Sajudis* in Lithuania to ascertain their significance for reform which was fundamental for any further changes in society such as the establishment of ecologically sustainable society. The Green Movement, in particular, is analysed so as to evaluate its likely influence in promoting, establishing, and maintaining such a society.

4.3.1 The Green Movement in Lithuania

The environmental crisis is bound up with the issues of human rights, freedom of information, and participatory democracy (Redclift 1989:182).

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[8] Whilst generally true, it should be emphasised that, as the Baltic nations became more determined in their bid for independence, the Soviet Government retaliated with a sign of military clout in January 1991, invading Riga and Vilnius with Red Army tanks. In Lithuania 13 people were killed.

These are areas of which Lithuanians were deprived. So, parallel to the nationalist uprisings, the Soviet Union witnessed an increase in environmental awareness (Peterson 1993:225). This awareness was, ironically, also facilitated by changes being made from above such as a more open media and opportunities for groups to express concerns. Environmental problems highlighted the lack of public participation in the political process and the suppression of information which, in turn, accentuated the powerlessness of everyday citizens to redress the impacts of the Soviet system on their personal lives. Environmental destruction thus became a focus for dissent:

> Environmental groups were the melting pot for the formation of active citizens and alternative elites; contacts were established between local activists, scientists within state-sponsored scientific establishments, and environmental groups in the west. The political changes of 1989 [and later in the FSU] threw many of these people into positions of political power (Fisher 1992:6).

Environmental issues, as a focus for political change, played a large part in the restoration of independence in Lithuania and the Greens generated mass support. Unlike what is referred to as the Green movement in the West - a general term for the many environmental groups, and their supporters which seek to effect change and which assumes an underlying value system - the Green Movement in Lithuania is an organisation which was officially established in August 1988. It has functioned as an umbrella organisation to which various environment-based groups or "factions" have been affiliated. However, the spread of regional groups and organisations that came under the Green Movement also suggests the kind of 'movement' of people seeking change as understood by the term in relation to the West. Recent affiliation status with Friends of the Earth International will see the Green Movement change its name.

References to the Green Movement in this Chapter refer to that Lithuanian organisation and affiliated bodies and do not, necessarily, refer to an underlying value system as would be assumed when referring to a Western notion of a Green movement. Nor do they refer to what became the Green Party. As founding member, Saulius Gricius said when the Greens began to lose their active base as a result of members moving into the bureaucracy and at the time when conflict was developing over the formation of a political party, 'it is unfortunate that the Lithuanian Greens do not understand all the ideas spread by the Greens around the world' (in Zemulis 1992:3). The

lack of an underlying value system amongst most of the supporters is at the root of the rather sudden decline in Green support. However, it could be said that the core group[9] that has remained committed to environmental protection, has done so because it has based its activities on such a Green value system. There is also an historical connection with the environmental organisations that existed during 1921-1940 such as the 'Adorning of Lithuania' which aimed to educate others about ecological matters, even though the problems were a lot different then without an intensive industrial sector. The organisation was abolished in 1940 by order of the Soviet Minister for Interior Affairs (Seselgis 1991:2-3) (see also 7.2.2.4).

Lieven (1993:220) cautions Western observers on using the term 'Green' in relation to the parties in the Baltic States since 'in all three countries, the Green parties stand on the nationalist Right, and their current activity is agitation for the removal of the Russian armed forces'. Such a phenomenon is partly due to their common origins in the national dissident movement. It is also related to the perception of the centrality of nature to Baltic culture, as discussed in 4.2.1, resulting amongst some nationalists in a kind of 'blood and soil' ideology whereby nationality is linked directly to the land (Lieven 1993:220). In this thesis, the term 'Green' is justified because it is argued that the Greens that remain (which were the core activists in its formation) do represent the kind of value system normally associated with Greens in the West. The Green Party, however, cannot be seen in this light which is why the Green Movement has remained separate from the Party since the latter was formed. Meanwhile, those with a 'blood and soil' ideology can be found across environmental organisations and the Party.

The Green Movement in Lithuania was born in the summer of 1987 when three young men (Saulius Gricius, Saulius Piksrys, and Remigijus Ciegis) decided to establish *Atgaja* in Kaunas. The group was founded near Kaunas castle in July 1987. This group was the beginning of the Greens as a movement. It was the beginning of organised environmental protest, however some action had taken place as early as 1986 on the initiative of Gricius and Piksrys such as a successful petition to halt drilling for oil in the Baltic Sea (*Atgaja* 1992:2). Later, in August 1988, the Green Movement was formed as an official organisation and *Atgaja* became part of its structure (*Atgaja* 1992:2). At the founding meeting in Klaipeda, Gricius exclaimed: 'we have distanced

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9. Whom I have called the "Greens" as distinct from the "Greens' supporters".

ourselves from nature and deemed ourselves the gods' (Balbierius 1992:3). A conference in May 1989 at Rumsiskes, led to the formation of the Green Party, despite some opposition from people such as Gricius. Whilst he was not opposed to the creation of a party *per se*, he was not certain that those creating it had altruistic motives, believing that they were motivated by a career opportunism. Nor did he believe it was the right time to do so (Zemulis 1992:3).

When the Movement first formed, access to the media was still restricted, so a Green newspaper was formed: *Zalioji Taika* which later became *Lygsvara*. The Greens at that time could be said to have constituted four main factions; Green Greens (such as *Atgaja*), Grey Greens (mainly scientists), Red Greens (pro-communists), and the Green Party (membership constituting mainly Grey Greens with a few Greens and Reds included) (Ruta Gajauskaite pers comm. October 1992). The Red Greens were derived from the communist Komosol groups in order to counteract the influence of Green Green activities. Such oppositional groups developed in a number of sectors but have since declined in number and influence.

Besides some genuine concern for environmental devastation, there were a number of factors which influenced the fervour with which the country protested environmental problems (often with the co-operative support of Latvia and Estonia). Gorbachev's reforms in 1985 were to prove crucial to the rise of the green movement throughout the USSR and Eastern Europe. The environment issue was seen as relatively safe politically (Mason 1992:61) because debate on such issues did not, at first, question the prevailing political order nor did it possess an ideological history (Fisher 1992:5). In such a way, environmental issues 'could be presented as issues of rational economic efficiency and technical planning rather than as direct assaults on regime legitimacy' (Smith 1994:129).

There was also a nationalistic concept of nature led to the perception that Lithuania's environment was another aspect of Lithuanian life that the USSR was destroying. So, in effect, environmental issues acted as a de-legitimising agent in society, seen by the people as 'an indictment of the policies of the regime in all quarters' (Kabala 1993:50). Thus, the only perceivable remedy was the complete reconstruction of the political system (Kabala 1993:50) (see also 7.1).

In addition, the exploitation of Lithuanian resources for the benefit of the Soviet Union as a whole was seen as detrimental to both the economy and the environment in Lithuania. Environmental problems epitomised the failings of the Soviet system. For Lithuanian reformers, an easy focus of opposition was the destruction of their homelands. The lack of control over natural resources, which were exploited beyond the needs of individual republics, pointed to ecological colonialism. In essence, 'nature became a medium for social change' (Peterson 1993:216) as people realised that 'their bitter enemy is neither pesticides nor technology but the system that makes use of them' (Redclift 1989:180). Environmental issues, then, were important in overthrowing the communist system by 'providing an organisational basis, oppositional know-how, and political leadership for promoting the cause of national self-determination' (Smith 1994:129). As time has passed, the Greens have needed to turn their attention away from the Soviet system and the past and redirect it at independent governments. While this has been difficult for some (indeed it is at the heart of the decline in Green support as discussed in 4.3.4.1), there has been such a trend amongst the core Green activists who recognise that environmental problems remain, and have been generated, in independent Lithuania. Just as in the West, their campaigns are directed at the usual government bodies and agencies with a focus on public education (pers. obs.). Environmentalists have also developed their professional skills since the restoration of independence (Vainius 1996:41) and this, together with their regular contact with organisations abroad, places them in a similar position to their counterparts in the West.

4.3.1.1 The Greens and Politics

Nationalism amongst the majority of the Greens' supporters is the prime motivation for action. The core of the Green Movement (those pursuing environmental aims on the basis of an environmental ethic) also had a sense of national sentiment though this was not the primary focus. It is clear that the Green Movement viewed independence as necessary in order to protect Lithuania's environment. Janis Peters from the Latvian Popular Front summed up the feeling of Baltic nationalists and Greens alike in the late 1980s when he said that only independence 'now can lead us out of our political, economic, ecological, and national crisis' (quoted in Peterson 1993:216).

However, it must be noted that the core group has continued to apply pressure

to all subsequent governments in areas of environmental protection, including international issues. This demonstrates that at least a part of the Green Movement has been relatively independent of formal politics. At the same time, the political climate in which independence was restored provided a platform for voicing environmental concerns and therefore, was useful in generating widespread support which was necessary for success in achieving their aims. One means for a movement to achieve its aims is to increase its membership. The key to successful lobbying of government by such groups is organisation, numbers, and finance - the latter usually dependent on membership (Spann 1979:476-8). The success of attracting widespread membership was fundamental to the Greens and membership decline, the result of a number of influences, is a serious problem now faced by the Greens in Lithuania. A lack of finance during the economic turmoil of 1991-2 also affected their ability to continue their aims.

The Greens can never really be detached from politics since their actions are political and their aim is to affect policy. Indeed the formation of an environmental group was a statement on the right of autonomous social groups yet it could also be argued that such acts were unintentionally political (Fisher 1992:6). It has been established that the development of the Green Movement was influenced by the political climate of the time. *Glasnost* and *perestroika* had allowed a situation where such a movement could expand and be involved in the political process. Indeed, the environment obtained some of its legitimacy from the central government because of the increasingly obvious degradation, the international interest in environmental issues, and a need to ensure acceptable living standards (Fisher 1992:4-5). In 1993, a member of the Lithuanian Green Party suggested that the Greens' 1988 success in halting operations at the Ignalina Nuclear Power Station only happened because Gorbachev allowed it to happen (pers. comm. Ruta Gajauskaite). One might argue that this and other Green achievements were superficial and constituted part of Gorbachev's scheme to generate Western support for his reforms. However, it is also possible that the former President simply underestimated the influence the Greens would obtain. Peterson notes that:

> Ironically, nuclear power stations, noxious chemical plants, and hazardous waste disposal sites provided the first safe political space in which individuals could organize and work against the communist regime, because these targets of protest often were distant from the centers of political power and thus were not considered a direct and visible threat to the political leadership (Peterson 1993:225-6).

Fisher agrees, commenting that the communist regimes throughout CEE and FSU 'underestimated the symbolic significance of the environment, which raised questions by implication about economic, political, and ideological issues' which, coupled with an increase in dissemination of scientific material on pollution, left the environmental movements 'in an increasingly powerful position to undermine the carefully constructed facade of order' (Fisher 1992:6).

The formation of the Green Party split the Movement and it remained divided. Despite reservations from the core group, the Green Party went on to secure 4 seats in the parliament at the 1990 elections[10]. The cleft between the two widened in the following year as the Green MPs appeared ununited and lost contact with the Movement (Balbierius 1992:3). By the 1992 elections, support had already weakened and the Greens failed to win any seats. They did not contest the 1996 elections (more discussion on both elections is presented in Chapter 7).

Now that Lithuania has regained and maintained independence for over five years, it is interesting to analyse the influence of the Greens today and the problems they face. The Soviet system has left its mark on every facet of society. The new political structures are by no means free from its impact. Communist Party politicians became accustomed to governing without interference from individuals and public interest groups. It is likely to take 'decades of democratic experience to eradicate dictatorial tendencies that continue to pervade the political cultures of the newly independent republics' (Peterson 1993:221). Many bureaucrats are not willing to accept the notion of public involvement in the policy process (see also 7.2.3). The challenge for environmental groups is particularly difficult as other issues, such as the economy, gain precedence over environmental issues (see 4.3.1.2 and Chapter 5).

Political antagonism toward the Greens has had implications for the effectiveness of environmental protection administration in Lithuania. For example, the Lithuanian Democratic Labour Party (LDDP) Government's Minister for Environmental Protection, Bronius Bradauskas systematically and openly implemented a political cleansing of his department and city agencies, dismissing employees actively involved in green organisations.

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[10] Zigmas Vaisvila, Ruta Gaujaskaite, R.Astrauskas, and A.Taurantas.

At a time of increasing unemployment several people affected were unable to find replacement jobs quickly and when jobs were found, these often did not match their skills. The environment is the ultimate loser since those environmental advocates, while remaining involved in the various NGOs, were no longer in an official position to influence policy implementation. Such measures suggest a very low commitment to enacted environmental legislation given that those dismissed were committed and very skilled personnel.[11] As section 7.4.3.1 demonstrates, one of the failings of the new suite of environmental legislation in Lithuania is that the agencies obliged to implement them are not adequately resourced to do so (Fisher 1992). Such resources should include well trained personnel, preferably with an understanding of ecological systems and the threats to their integrity.

Further, the apparent fall in support of the Green Movement (see 4.3.4.1) was influenced by the political and economic situation that followed. Like *Sajudis*, the Green Movement did not aim to be a political party, however, some members developed political aspirations. Unlike *Sajudis*, however, the Greens consciously worked at not officially entering the political arena evidenced by the opposition to creating a political party. Tensions within the Greens developed as early as 1987/8 when some members with political aspirations moved to *Sajudis* and took with them their energy, skills, and activism (Zemulis 1992:2-3). *Sajudis*, on the other hand, tended to develop into a political entity apparently unaware of the contradictions (see 4.3.3.1). The Green Movement, perhaps unwillingly at times, thus became entrenched in the political process. While many would claim to be apolitical[12], to be non-political would mean abandoning a desire to effect change.

4.3.1.2 The Greens and the Economy

It has also been argued that, in times of economic depression, environmental

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11. This information was relayed by some individuals affected from within environmental groups and no exact details or media coverage regarding the dismissals were obtained.

12. It is interesting to note that the results of a survey, carried out by the author to ascertain levels of environmental awareness and commitment in students and people involved in Green groups, indicated that 61% of people registered in a Green group would vote Green, 7% would not, and 30% were unsure. Of those Greens interviewed that were involved but not officially members of a Green group, 28.5% said they would not vote Green, 28.5% said they would and 43% were uncertain, indicating that it would depend on the individual candidate. Although this survey was not repeated in later years, the further decline in the reputation of Green candidates would suggest that the number of members voting Green would have further decreased.

concerns are 'put on the backburner'. The economic hardship which followed the restoration of independence (as discussed further in Chapter 5) may have made it difficult for people to concern themselves with environmental quality when their own survival and that of their families became their highest priority. Further, the Greens have been the focus of criticism because their actions are seen as blocking or slowing economic recovery and growth (Peterson 1993:197, 221 and 225). They have certainly had a role in closing many polluting enterprises throughout the post-communist region and for that they have been able to engender mass support but have also been accused of economic sabotage. From the perspective of the environmentalists, they have been made scapegoats for the failings of the Soviet economy, pointing out that many factories were closed on economic grounds rather than solely environmental ones (Peterson 1993:222). The persistence of those working in the Green Movement today attests to the fact that it is not solely economic issues that have led to the decrease in support since they, too, have had to live in poor economic conditions. Some of these reasons are discussed in previous sections and later chapters are also dedicated to understanding the panoply of issues which have led to environmental issues being placed 'on the back burner', forfeiting any progress toward an environmentally sustainable society. One of these reasons is the nationalist origin of the movement.

The success of the environmental movement in effecting change in the early years of its formation is founded primarily in the popular protests of environmentally degrading projects, such as opposition to the planned third and fourth nuclear reactors at Ignalina. There was not so much focus on pollution abatement or improving the conditions at existing factories. They have, therefore, been criticised for not offering alternatives in the face of economic decline. Thus, a more difficult task, faced by Greens around the world and noted by Peterson (1993:222), is in providing credible alternatives to the status-quo. It could be said that the Green Movement in Lithuania was never going to offer such alternatives in the early days of opposition, not least of all because the majority of the members did not have an intrinsic concern for the environment. They were, as it has already been stated, a basically independence orientated movement and, to that end, focused on the environmental issues resulting from Soviet occupation rather than on developing comprehensive alternatives. A related issue is that the economic depression affected the resources available to the Greens for funding campaigns (Peterson 1993:194) which led to an apparent 'silence' on specific

environmental issues in the early years of independence. Affiliations with international organisations such as the World Wide Fund for Nature (WWF) and Friends of the Earth International (FOEI), have eased the financial burden of the Green organisations in Lithuania, as has the development of skills, and the acquisition of office equipment.

4.3.1.3 The Greens and Religion

Several members, including those who founded the Movement, have also been involved in the pagan revival. There seems to be a mixture of nationalism and an identification with the value placed on the environment in Lithuanian paganism. Events, centred on singing national songs at sacred hills, were organised even before independence was restored. These national songs *(dainos)*, although derived from ancient times when Lithuania acted as a crossroads between paganism and Christianity, are an essential element of Lithuanian identity and are, therefore, sung by pagans and Catholics alike. There are also people involved in the Green groups who profess Catholicism who endeavour to protect nature as stewards of God. Some members (such as Saulius Gricius) have found an ethic or philosophy of life in the pagan ways of their ancestors which they have actively followed as part of their concern for environmental protection. Gricius actively encouraged paganism and had a pagan wedding. He found his environmental ethic in paganism, declaring 'a song, a story, a legend of our forefathers is the Primer of nature protection' (in Zemulis 1992:2). However, it does not necessarily follow that paganism leads to an environmental ethic in the contemporary world. As discussed below in 4.3.2, although the primary pagan organisations in Lithuania express affinity with nature, they do not generally focus their attentions on contemporary environmental problems. Rather, their primary focus is on spirituality and heritage.

4.3.2 Romuva - the Pagan Revival

Romuva is the name given to a pagan organisation based on the spiritual tradition of ancient Lithuanians which has followers in Vilnius, Kaunas, Boston, Cleveland, Toronto, and Chicago. The congregations in Canada and the USA were established after World War II, while other groups were formed in Siberian exile. The Lithuanian groups have around 50 active members with a larger participation at special ceremonies and celebrations (Dundzila 1996:52-3).

The name '*Romuva*', literally meaning both temple and harmony, refers to the Prussian Baltic sanctuary which was situated in Nadruva (near Chernahovsk in the Kaliningrad region). The sanctuary was the religious centre of all the Baltic peoples (Lithuanians, Prussians, and Latvians) and the spiritual leader, *Kriviu Krivaitis*, was said to reside in the sacred forest that formed part of the sanctuary. Statues of three major gods, *Perkunas* (thunder, lightening, and justice), *Pikuolis* (the dead and cattle), and *Patrimpas* (avatar of Dievas, the sky god) situated by a millennial oak tree, the focal point of the 'temple' (Dundzila 1996:52).

Romuva is not only founded on spiritual folklore but also on the cultural traditions of Lithuania's predominantly peasant ancestry. Thus, groups meet to engage in the activities of their ancestors such as singing, dancing, games, proverbs, weaving, embroidery, sculpture, and the making of traditional musical instruments and ornaments. They also actively engage in intelligentsia-based discussions, studying the works of the archaeologist/anthropologist Marija Gimbutas, seminologist Algirdas Julius Greimas, and various mythologists (Dundzila 1996:52).

Rituals are carried out for the important events such as *Rasa*, the summer solstice as well as for events in the Christian calendar such as Christmas. The groups base their lives on the spiritual world view presented in folklore and, in such a way, have a strong sense of national identity. Another group in Lithuania, *Ramuva*, has an even greater focus on national heritage and less on pagan spirituality. Like *Romuva*, they gather to sing national songs, play traditional music, and work on crafts. Many members of *Ramuva* are also practising Catholics (Jonas Trinkunas, pers. comm. November 1994). They have, therefore, an even more distinctly nationalist focus.

According to one of *Romuva's* Elders, Jonas Trinkunas, the membership of neither group is based on an underlying environmental ethic. While some members may have such an ethic of which pagan spirituality and practices forms a part, in the main followers do not join with an aim of promoting an environmentally benign society (pers. comm., November 1994). As Lieven (1993:114) has pointed out, the pagan elements of Lithuanian culture are not the same as the paganism practised before, and for at least a century after, conversion in 1387. However, *Romuva* attempts to carry out ceremonies and other activities according to historical guidelines and have been assisted in this task by comprehensive scholarly works on the topic by Gimbutas and

Greimas. Yet there is no strong evidence in their activities of an environmental ethic, aside from a notion of connection with the soil and a nostalgia for the days of rural bliss.

If a pagan revival was to become evidence of the development of an environmentally sustainable society as envisaged by those highlighting the pagan perception of nature, then one would expect support for groups such as *Romuva* to be much higher. More importantly, since it cannot be shown that those living according to a neo-pagan philosophy incorporate environmental protection into that world view (particularly one which claims authenticity), it might be said that a greater level of support would not lead to such a society either. The main issue seems to be that both *Romuva* and *Ramuva* are fundamentally nationalist organisations, albeit without political aims. They promote national culture on an exemplary basis.

So, while the pagan revival is interesting, it demonstrates that historical, pagan-based perceptions of nature (particularly animism and veneration of the natural world) do not necessarily translate into contemporary notions of an environmentally sustainable society. The changes in society which saw the re-emergence of pagan practices also led to movements with a much larger support base, but also based on similar national sentiments; the Greens and *Sajudis*.

4.3.3 *Sajudis* - the Reform Movement

The Reform Movement (*Lietuvos Persitvarkymo Sajudis* - the Lithuanian Movement for Perestroika) entered public life in June 1988 responding to Gorbachev's call for the participation of social groups in the Nineteenth Party Conference aimed at reinforcing his programme of *perestroika.* This represented the opportunity for groups, particularly from the intelligentsia, to officially express concerns regarding the future of Lithuania's environment, language, and national culture. As early as 1986, the Writers Union had issued a statement condemning proposed oil drilling in the Baltic Sea and later included chemical fertiliser use and other influences on water pollution in their critiques. In March 1988, they accused the USSR of colonial-style management of the environment. The later programme of *Sajudis,* issued in October 1988, 'insisted on a rational program of economic development that would not injure the already-endangered environment of Lithuania' (Senn 1990:205). In April, they argued for Lithuanian to be made the official

language of the republic, the restructuring of the school curriculum, particularly history, and public discussion of any further industrial development. Later, a group of "creative artists" called on the Conference to afford each republic greater economic autonomy and to support the national cultures (Senn 1990:24 & 55-6).

An Initiative Group of thirty six 'concerned intellectuals and other public figures' was formed at a meeting on June 2, 1988 (Senn 1990:59). Key figures in this group were Vytautas Landsbergis (a musician), Arvydas Juozaitis (a philosopher), Zigmas Vaisvila (a physicist), Vytautas Petkevicius (a writer), Kazimiera Pruskiene (an economist), and Bronius Genzelis (a philosopher). The group seized on the notion of *perestroika* and often used it as a justification for their activities. The original aim of *Sajudis* was, through enforcing *perestroika*, to obtain some political and economic autonomy for the republic. In the early stages no-one dared mention the word 'independence' and they professed no intention to become a permanent organisation, declaring that once the party had truly dedicated itself to *perestroika*, they would disband (Senn 1990:65). Communist Party member and future Prime Minister of independent Lithuania, Pruskiene, pointed out in August 1988 that *Sajudis* was a social movement with no intention of becoming a political party (Senn 1990:114-5). By August 1989, probably influenced by the events in Eastern Europe, they had acquired the confidence to call publicly for independent statehood (Smith 1994:132). The relative speed at which all three Baltic movements made this change has been noted by Smith (1994:132):

> That the Popular Fronts so quickly became separatist in their aims and in the process were able to convince their peoples so easily of the rightness of their cause were in one way or another linked both to the way in which powerful national symbols were drawn upon and equated with a pre-Soviet past and of the material benefits which sovereignty might again provide.

Originally designed to be a ginger group, *Sajudis* had constantly to define itself in the face of both emigré and criticism from the Communist Party of Lithuania (CPL). The "extreme" LFL provided a radical benchmark as much as the party administrators demonstrated the conservative alternative. *Sajudis*, at least initially, tended to identify itself between these polar opposites. While LFL, with a focus on release of political prisoners, tended to bear the brunt of party criticism, *Sajudis* was also attacked for nationalistic behaviour. Prominent members constantly defended their statements and actions as being within the bounds of *perestroika* and not anti-soviet or nationalistic. Again, the negative view of nationalism presented over the previous fifty

years had some impact. However, their assertions that they were not nationalists were based on a perception of the term rather than an accurate description of their activities (see 4.3.3.1). League members admitted to presenting a similar platform as *Sajudis* but they argued more boldly for 'a free Lithuania in a confederation of European nations'. They criticised *Sajudis* for what appeared to be unnecessary diplomacy and cautiousness, declaring them as simply part of the system they were supposed to oppose (Senn 1990:69 and Hiden and Salmon 1991:157).

The mass rally of August 23, 1988, attended by an estimated 250 000 people, represented a turning point for *Sajudis*. This meeting brought the issue of national self-determination to the forefront. Priorities had adjusted to the wave of public support; *Sajudis* had a public mandate. 'Reform, as required and defined by the Lithuanians, advanced' while *perestroika*, as defined by Moscow, receded (Vardys 1991:14). Nevertheless these views were more modestly expressed in official forums. Just prior to its Congress in October 1988, *Sajudis* published its programme in the daily press where it re-iterated its role as a citizens' movement supporting the principles of *perestroika*. The programme was divided into nine sections; General Principles, Society and the State, Human and Civil Rights, Social Justice, Nationality, Culture, Religion and Society, Economics, and Ecology (Senn 1990:203).

4.3.3.1 *Sajudis* and Politics

In the early stages of development, *Sajudis* made no attempt to produce a political programme. It arose in opposition to the undemocratic naming of delegates to the Nineteenth Party Conference yet 'produced no program for intra-party democracy, much less a multiparty system'. Its prime intention at that stage was to be a temporary movement with a general sense of reform (Senn 1990:65). Following the mass rally in August 1988, however, *Sajudis* almost stood as a second government. It had no legal power and could not pass any laws yet it had a moral authority endorsed by the population (Senn 1990:136). No-one seemed to be concerned with the contradictions between the way *Sajudis* was now moving and those earlier claims of not becoming a political opposition (Senn 1990:166). Along with claiming no political intentions, the movement actively defended its activity as being in the name of *perestroika*. Its activities were 'not nationalism, but the wish that the republic should be the most Soviet, the most "socialist", in our Great Fatherland' (Juras Pozela, President of the Academy of Sciences in Senn

1990:103).

The commitment of *Sajudis* to *perestroika* might be attributed to a number of reasons. The fact that over half of those involved were also members of the Communist Party of Lithuania (CPL) meant that *Sajudis* had to also consider party activities (Senn 1990:167). Many of the members were committed communists who believed in the reform package as presented by Gorbachev. They openly criticised the Stalinist version of socialism, preferring Marxist-Leninism as a "true" form of socialism (see Chapter 5). In addition to this connection with the party, no-one could imagine how far opposition would be tolerated. The movement had no any official status and had to face the possibility that the authorities would stamp them out. This called for caution and *Sajudis* continued to deal with the party up until the violent actions of the security forces at a rally in September 1988 (Senn 1990:178-83). In fact, even after those events, at a *Sajudis* press conference, Cekuolis asserted that they supported the line of *perestroika* and Petkevicius added that they 'opposed only those "Stalinists" who did not understand the meaning of *perestroika*' (Senn 1990:214). This continued negotiation with the party along with their resistance to aligning themselves with the LFL brought suspicion and contempt from the emigré community. The 'LFL and its emigré supporters considered *Sajudis* a government stooge' (Senn 1990:76).

To a point, the tactics of *Sajudis* had elements of political opportunism, in its understanding that to oppose the party boldly from the beginning might lead to its early demise. In such a way:

> The Lithuanians have used Gorbachev's original arguments and rationale for *glasnost* and *perestroika* to give their own aims legitimacy, while those aims have gone far beyond his (Vardys 1991:12).

The more extreme LFL, for example, may not have survived had it not been for the moderating influence of *Sajudis*. But this is speculation. It is very difficult to predict what might have happened during this time, just as it was difficult for *Sajudis* to predict how far reform would go. In effect, most believed that they could only hope for autonomy within the Soviet Union. Future Chairperson of the Council of Lithuania, Landsbergis, for example, responded to another member's idea that *Sajudis* should prepare a policy statement on secession by declaring that he preferred to use the word 'self-determination'. He explained that the future of the Soviet Union looked so promising under *perestroika* that Lithuanians would surely want to be

included in it, but added that it was good to have the alternative included in the constitution (Senn 1990:152).

As noted earlier, the LFL was considered by government to be a radical anti-soviet group that had "provocative goals hostile to socialism" by aiming to restore bourgeois Lithuania (Senn 1990:186). It was also thought of as extreme by many members of the Initiative Group. The government used the "fascist" label it had employed for fifty years with respect to the right wing Smetona regime of the 1930s. Any system that was not 'socialist' was bourgeois and therefore against the people. To be labelled a 'nationalist' (or worse, a 'fascist') was highly derogatory and the indoctrination of such labels did not extend to Lithuanian emigrés who spent the occupation period in the West. Thus, they tended to give stronger support and recognition to LFL, tending to view *Sajudis* as too cautious. Perhaps these were the source of Senn's 'observers from abroad'. Ironically, Lithuanians began to use the term 'fascists' to describe Party officials and the *Saugumas* (security forces/Lithuanian KGB). Bogusis, a leader of the LFL, recalled that following the intervention of the security forces at the rally in September, 1988, people had been shouting; 'Fascist occupiers out of Lithuania!' (in Senn 1990:186). Perhaps this was to make a point regarding the similarities between the German occupation in 1939 and that of the Soviets in 1940, or to attack them by using a term which they hated most, or perhaps because of a general understanding of its derogatory tone (for more discussion on the use of political terminology, see 7.2.1.1).

Although previously having willingly accepted the participation of party members in its ranks *Sajudis* formally declared itself the opposition to the CPL in December 1989. This followed the party's announcement of a new Central committee over half of which constituted *Sajudis* supporters, including prominent members such as Pruskiene, Ozolas, and Genzelis. The overlap was becoming too great and *Sajudis'* aims blurred. The LFL continued to denounce both as collaborators. *Sajudis* had made its first steps of political representation by winning all four seats it contested at the by-elections of the Supreme Soviet in January 1989 (Senn 1990:250 & 254). At these elections, both *Sajudis* and the CPL supported Lithuania's sovereignty but held different interpretations about what this might mean. For the Party, sovereignty still referred to autonomy within a Leninist Soviet federation while for *Sajudis* it meant 'the natural and inalienable right to establish an independent Lithuania' (in Vardys 1991:18). With the cleft between the Party and the

Movement now clearly defined, different ideological positions and political aspirations of some members led members in different directions. What is evident is a shift toward a more active role in the formal political system.

The Party, recognising the shift into a force for national rebirth and perhaps the need to save their own privileged positions, later became less critical of *Sajudis*. The tolerance was to be short-lived as the drive for political independence excluded any support from the CPL which could not remove itself so directly from its ideological position of communism. However, *Sajudis* was to become even more politically successful, gaining a majority of seats at the elections to the Lithuanian Supreme Soviet in March 1990 just after the declaration of independence which was officially restored in September 1991, following the failed coup in Moscow and culminating in Russia's secession from the USSR and their recognition of Lithuania as an independent nation (see Chapter 7).

Since independence has been restored, a number of interesting events have taken place. *Sajudis*, with its aim of independence achieved, has struggled to remain cohesive and there have been several splits resulting in the formation of other political parties. The breakdown in cohesiveness could be symbolised in the speculation, just prior to the 1992 national elections, that the *Sajudis* figurehead, Landsbergis, might leave in order to join the Christian Democrats (Grineviciute 1992:1). The political arm of *Sajudis* held a majority in parliament but found it difficult to effect other changes in society under harsh economic conditions. New aims needed to be established and 'maintaining independence in Lithuania' was not enough. Regaining Lithuania's "economic independence" became the catch-cry in a period of economic transition made more difficult by Russian blockades (see 5.4.3).

4.3.3.2 *Sajudis* and the Economy

Integral to all of *Sajudis'* activities was the notion of economic self-determination. In arguing for political autonomy, Lithuanians wanted control over their own resources and finances, including the re-introduction of the national currency. A Soviet journalist, writing in *Sovetskaia Litva*, in September 1988, questioned the need for a national currency and stated that Lithuania might face problems obtaining certain products under a market economy, warning 'we don't want to live worse than now even for one day' (Senn 1990:150). Such statements seem to have a prophetic taint in light of

the economic situation that ensued following the declaration of independence in March 1990 (see Chapter 5). Yet few would desire a return to the Soviet economic system now blamed for social and environmental ills in the former republics. The independence years from 1918-1939 demonstrate that the Baltic states are viable economies (Hiden and Salmon 1991:188). The fact that Estonia had an equal or higher standard of living than Finland at the outbreak of WWII (Senn 1990:232) highlights the possibilities for successful economies. Lithuania was generally poorer and more agricultural than the other Baltic states (Lieven 1993:64) which, some have argued, together with their more conservative approach to finance (Vardys 1965:25-7) meant less emphasis on industrial growth and other capitalist principles, ultimately leading to less pollution (see Banks 1991:33).

Just as *Sajudis* recognised the role of the Soviet economy in environmental degradation, future governments, must envisage the possible environmental problems associated with a market economy. With economic recovery, it is important to consider environmental protection in order not to repeat the mistakes of the communist system under a new regime or those of the capitalist systems they seek to emulate (see Chapter 5).

A blueprint for Lithuania's economic independence was developed by a committee from the Institute of Economics of the Lithuanian Academy of Sciences which continued its work under the auspices of *Sajudis*. The fundamental bases for the blueprint were that Lithuania's economic system should be independent from that of the USSR and that reform should be based on market principles. The first was considered a political and economic necessity. This required all economic activity to be under the control of the Lithuanian governments, all resources within their borders to republic property, and that the All-Union budget must see the Lithuania as a distinct economy that levy its own taxes (Samonis 1996:142-3) (see also 5.4.3.1).

These reforms needed a legal framework so *Sajudis* drafted a new constitution which was approved by the council on November 13, 1988. It was expected that Lithuania's Supreme Soviet would accept the proposal on November 18. However, Moscow found the reforms unacceptable. Gorbachev devised amendments to the All-Union constitution that actually called for greater centralisation restricting the rights and representation of the republics. All three movements joined forces to declare opposition to Gorbachev's new proposals and mass petitions were signed with 1.8 million people signing in

Lithuania alone. (Vardys 1991:16-7, Senn 1990:243, and Smith 1994:133). Economic concerns thus became influential in the collapse of the relationship between *Sajudis* and the Lithuanian Communist Party. Brazauskas, First Secretary, strongly supported the plans for economic self-sufficiency but split with *Sajudis* over the issue of constitutional reform. Moscow was clearly at odds with Lithuanian reformers and the Lithuanian Communist Party was in the middle (Senn 1990:243).

4.3.3.3 *Sajudis* and Culture

In the early stages, *Sajudis* did not have a formal programme but did issue a statement on the general lines of its focus. On the topic of cultural matters, two "commissions" outlined their intentions. The Cultural Commission of *Sajudis* , headed by writer Vytautas Bubnys, proposed: to mobilise intellectuals' unions in saving Lithuanian culture; to fill in the "blank spots" in the country's history; to obtain control over cultural monuments; and to facilitate closer co-operation with the emigré community on cultural issues. The latter, in the context of 'one nation, one culture', became a popular theme. These aims were not dissimilar to those reported in the *Ausra* newspaper in 1833 when national sentiment was rising in opposition to Tsarist rule and in which language and history were the key (see 4.2.2.2). The Social Commission, headed by the philosopher, Bronius Genzelis, focused on the bureaucracy by calling for an end to their privileges and for increasing accountability (Senn 1990:62). It also pointed to increasing standard of living for workers and improving welfare benefits - the cornerstone provisions of a socialist system.

A notable omission from these early "policies" was religion. The members of the Initiative Group were primarily intellectuals, products of an education system that excluded religious believers from intellectual pursuits. Although some had maintained religious convictions, generally *Sajudis* and the Catholic Church had distinct aims. The Reform Movement argued for genuine freedom of religion or spirituality as provided for in the Soviet Constitution. While they were not particularly religious themselves (Landsbergis came from a Protestant family), they recognised the role of the Catholic Church in Lithuanian heritage and welcomed Church leaders at their rallies (Senn 1990:9 & 66-7). At the August 23 rally in 1988, Landsbergis interrupted a Catholic priest to point out 'We are against any sort of spiritual dictate; we are for freedom of spirit and mind in all respects' (in Senn 1990:126). There

were certainly national and religious symbols used in the *Sajudis* protests, including at their Congresses. Lieven (1993:109) noted the 'national-religious theatre' orientation of the opening session of the Third Congress in December, 1991. At a mass celebrating that Congress and the birthday of the medieval king, Mindaugas, the priest prayed for *Sajudis* and its leaders and stated that the church was glad that they were the leaders of the Lithuanian nation (Lieven 1993:366).

It was perhaps easier for *Sajudis* to deal with questions of minorities in Lithuania than the other Popular Fronts since 96 per cent of the founding delegates were Lithuanian (Smith 1994:131) and 85 per cent of the total population belonged to the same religion. The cultural homogeneity of the organisation, reflecting the situation in society, certainly facilitated the mass-mobilisation of support. The LFL, which directly aligned itself with the Catholic Church, criticised the Reform Movement for being cool and unfriendly toward the church as well as other Lithuanian traditions. But, ultimately, the aims of both the Church and the LFL were facilitated by the activity of *Sajudis* (Senn 1990:69-70).

The programme issued in the lead up to the Congress guaranteed 'social, economic, and cultural rights and freedoms' for all minorities, adding that equality can only be realised if all nationalities within Lithuania recognise the right of the Lithuanian people to self-determination and 'become acquainted with and respect the history, culture, and language of Lithuanians' (in Senn 1990:204). In discussing the programme, members emphasised that cultural freedom, cultural pluralism, environmental concerns, sovereignty, education, and a spirit of renewal were the prime areas of focus (Senn 1990:205).

4.3.4 *Sajudis* and the Greens: A Fusion?

As *glasnost* took effect in Soviet society, the concepts of nationalism and environmental protest often became interrelated (Pryde 1991:256). The non-institutional character of social movements, such as *Sajudis* and the Greens, meant that they could unify supporters from differing, or even opposing, value positions (Pakulski 1991:35). They developed simultaneously and, although each had its own members, the overlap in objectives facilitated large-scale support. The distinction between these two movements was, at times, blurred and often mutually reinforcing (Peterson 1993:215). As noted by Redclift (1989:183), 'ethnic identity and environmental consciousness

function as two sides of the same coin'. The affinity between environmental and ethnic or national issues meant that environmental groups 'evolved into an important catalyst for change in the Soviet and post-Soviet era' (Peterson 1993:193). In the first stages of *perestroika* when political activity was still prohibited, environmental issues provided an opportunity for people to vent dissatisfaction with the Soviet system. Thus, 'environmentalism provided the issues and space around which other political movements could coalesce' (Peterson 1993:225). However, such unity is precarious and could only be maintained by using specific language and symbolism and adopting vague strategies and tactics (Pakulski 1991:35-6).

The fusion of these movements can be attributed to the fact that they had a common enemy - the Soviet Union- and a common goal - independence (even if other aims were underlying these basic goals). The Greens' desire for independence came with the belief that an independent nation could, and would, protect its environment and its culture better than an occupying force. They were concerned with changing the system that denied them the right to decide how their own resources and environment were managed (Redclift 1989:182). A better environment was their ultimate aim, and this could only be achieved through regaining independence. Not only was it a question of independence being necessary for control over national resources, but opposition to the state was deeply rooted in opposition to the soviet "internationalism" which suffocated national identity. Thus, promotion and protection of cultural identity was seen by the Greens as integral to environmental protection. It was also closely related to a desire to effect change for future generations of Lithuanians. *Sajudis* wanted to create a better economic and cultural standard of living for Lithuanians which could only be achieved by regaining political independence over their rightful nation. In doing so, ecological protection was one of the few specific policy issues referred to in *Sajudis* speeches. For example, at the Third Congress in 1991, Landsbergis declared 'nature is crying as it is murdered' but made no other specific reference to aspects of state policy (Lieven 1993:258).

This fusion of the Green Movement and *Sajudis* was symbolised, or perhaps to some extent influenced by, the fact that Vaisvila was a leader in both movements. In *Sajudis,* he was a member of the Initiative Group and speaker for the Ecological Commission. Since, environmental concerns became the 'strongest rallying point around which *Sajudis* could collect support' (Senn 1990:64), it is not surprising that Vaisvila's interest in

environmental problems and his willingness to speak out against the Soviet Union led him to prominence in both groups. It also gave a wider audience for environmental concerns. To some extent, Alfred Senn's comprehensive account of the events leading up to the declaration of independence in 1990, also demonstrates the blurring of the two movements. The Green Movement is rarely mentioned in this account, although some ecological clubs are acknowledged. Environmental problems are also briefly discussed as are environmental protests but only in terms of *Sajudis*. The organisation of the protest at the Ignalina Nuclear Power Plant in 1988, for example, is accredited to *Sajudis* (Senn 1990:169) while other sources (pers. comm. Green Movement members and Balbierius 1992:3) record it as an action of the Green Movement. No doubt, Vaisvila's positions added to the confusion, however it does demonstrate the greying of events at that time and the organisations involved in them. The significance of key leaders is also apparent given that subsequent actions of Vaisvila (such as the decisions surrounding Kruonis Hyrdo-accumulation Station discussed in Chapter 2) were extremely influential in the decline in Green support (see also 7.2.2.3).

4.3.4.1 The Dissolution of *Sajudis* and the Greens

Sajudis, as a social movement, could not maintain itself in its original form after having achieved its goal of independence. A dissolution of the Greens in Lithuania following independence can also be observed. Some supporters of the environmental platform of 1990 had an intrinsic concern for nature and a desire to protect it - these are still working for that cause in what remains of the Green Movement. They are the core that worked for independence in order to achieve the ultimate goal of a more environmentally sustainable society. Many other Green Movement supporters had a stronger desire to protect the nation which, at that time, included the protection of the environment within the nation's boundaries. However, they exhibited no lasting commitment to the environmental goals and were satisfied with achieving the aim of independence. As Anatol Lieven (1993:218) has acutely observed:

> to a far greater degree than most observers realised - and this is no doubt true of many revolutions - nationalist struggle in the former Soviet Union has been largely a function of small groups of activists, working upon much vaguer feelings held by the population as a whole.

Whilst economic hardship may have been a factor in declining support, as discussed above, it is not a satisfactory explanation. The majority of those

who supported the Greens at protest rallies, and indeed the Reform Movement as a whole, during the fight for independence did so because the goal was independence and the enemy was the Soviet Union. They did not have the same level of involvement or commitment as the core group of activists and the environmental issues were sufficiently vague to gain support. As pointed out by Pryde, 'in areas where nationalism is already strong, environmental problems become a very convenient focal point for existing energies and organizations' (Pryde 1991:259).

Once independence was achieved, the enemy could no longer be the Soviet Union. As Mason (1992:113) has accurately observed, the social movements in the region attracted mass support in opposition,

> offering solidarity, identity, moral purpose, and the vision of a common enemy. With the displacement of the enemy, much of this becomes lost in the messy business of democratic politics.

Although the USSR still receives much of the blame for the state of the environment in Lithuania, the Greens have needed to focus elsewhere in order to protest current problems and their resolutions, as well as to oppose potentially dangerous new projects of the independent government. For nationalists, or patriots, it was much more difficult to consider the new independent government as an enemy and the Greens were ' not prepared for this turn of events neither politically nor psychologically (Balbierius 1992:3). 'It was easier and more exciting to overthrow communism than to design a constitution or re-create private property' (Mason 1992:113). was compounded by the fact that the values and interests represented by *Sajudis* and the Greens were so diverse, once the less value-specific goal of independence was achieved. The diversity of interests represented by *Sajudis* added to their difficulties in achieving the more focused tasks of governing (Mason 1992:113). These problems were further compounded by the enormity of the political and economic situation in which the new leaders found themselves, dramatic transformations which had no working precedent. The conditions which followed also affected the energy and resources available to supporters. Thus, the movements gradually lost support.

There has also been frustration on the part of concerned citizens at the lack of responsiveness of the new governments to environmental action as well as at the actions of key figures in the Movement or Party. Some of these figures probably "speculated" on the popularity of environmental issues in

their bid for power (Peterson 1993:226). Some oppositional spokespersons who went into public office, such as Vaisvila, began to champion the causes they previously fought (see 2.2.1, 2.4.5.1 and 7.2.3). The subsequent reputation of the Green Party in the wider community seemed to be transferred to the Green Movement as a whole, despite the fact that the latter emphatically maintains its autonomy. In the end, whilst Green parties tended to be the first to be formed in many areas of the FSU, they were quickly eclipsed by more conventional mass political parties which were nationalist in orientation (Peterson 1993:226). The national sentiment in the country led to a support for other parties and groups and made it easy to turn from "Greens" who were seen as traitors. As one environmentalist put it: 'the Green Party is red, blue, yellow - any other colour but green' (pers. comm. September 1992).

There are several factors which have influenced the development of the Greens in Lithuania and, hence, their apparent downturn. Whilst occupied, there was no official focus on environmental issues nor were there avenues for public expression of environmental concern which may have enabled consideration at the political level. Even when independent, it has been argued, the threat (or perceived threat) of occupation dominated political decision-making and, thereby, could have distracted attention from environmental issues (Banks 1991:24). The way in which decisions have been made in the second period of independence (from 1991 until the time of writing) would offer some support to such an argument. As the case studies have shown and as Chapters 5-7 further demonstrate, the main focus of foreign policy in Lithuania has been incorporation into the EU and other international organisations such as NATO in order to lessen influence from Russia and feel secure in the knowledge that independence will be maintained. As noted by Lieven (1993:219):

> Under Landsbergis, between 1990 and 1992, nationalist activists attempted to stamp Lithuania with their own neo-tradionalist vision, a product partly of genuine religious and cultural values, and partly of a paranoid fear of Poland, Russia, of international traitors, and indeed of the cultural influence of the West. The story of those years is the story of the failure of this vision, though it would be unwise to predict that it has failed for ever.

Lieven was rightly cautious in not declaring an end to political life for Landsbergis and his party and he has accurately described both the ideological basis for the national-type parties and the way in which they worked in office. It remains to be seen whether the new Homeland Union/Christian

Democrat Government will have a different approach.

The development of the Greens was further limited by the arrest, deportation, and death of outspoken intelligentsia which significantly reduced the typical base for such a group (Banks 1991:25). During the period of independence (1918-1939), the intelligentsia were very nationalistic and strongly orientated toward the West (Vardys 1965:28). They also represented a tradition of intellectual dissent which was essentially linked to concern about the social reproduction of cultural (including linguistic) identity (Smith 1994:122). Yet between 1940 and 1983, many were incarcerated, some were killed or died in prison. For example, one in ten members of the Writers' Union were incarcerated in 1948 (Girnius 1986:40). In the West, intellectuals play a significant role in Green organisations. Those that remained (and their successors), did indeed emerge as leaders of the national and Green movements (Smith 1994:122). However, once independence was achieved many of these professionals moved on to positions of power and authority in the government or bureaucracy, removing part of the intellectual base of the active arm of the Movement (see also 7.2.2.3).

The Movement also suffered following the suicide of Saulius Gricius in May 1991. He had been not only an active member of the Movement and a key public figure, but had also pushed for reforms from within the system firstly in the Soviet Nature Protection Committee and later as a councillor (and vice Mayor) of Kaunas. His primary goal was the construction of waste water treatment in Kaunas (see 3.4.1.1) during his five year term. He had been continually frustrated in his attempts to affect change in the environmental sphere while working within government:

> I have spent three years (1987-1990) working on this problem [waste water treatment] but the final result is zero. Sometimes I think, is it at all possible to do something good for nature? (in Zemulis 1992:11).

The formation of organised groups was only in its infancy when the Greens formed in 1988. And all of the above-mentioned factors prevented the movement from achieving the depth found in Western environment movements. Without this depth, it was unable to withstand the political and economic pressures of transition which were major causes of the decrease in support.

It must be added that the uneasiness with blaming the national government

has ebbed somewhat with time. It could be argued that it became easier to blame the LDDP Government, formerly the Communist Party, for environmental or economic problems, since they still have an image of having a Russian leaning. However, it is difficult to make this hold as a mono-causal influence since the LDDP and its leader, Algirdas Brazauskas, continued to lead in the popularity polls throughout most of their term in office. Another reason is that, under the pressure of low standards of living which have not improved as quickly as predicted, people need to protest and the government, which has the power to effect change, is usually the focus. The people have learnt to blame the government, and even the West or the capitalist system in general, for economic problems but not so much for environmental problems. This is mainly because of the lack of intrinsic concern for nature. While people may feel powerless to effect change in either area, they are more likely to protest about economic conditions than environmental ones even though both affect standard or quality of life.

The seed of 'environmentalism' has been planted in the minds of Lithuanian. Even if today there appears to be a general apathy in relation to protection (see 7.2.2.3 and 7.2.3), 'environmental issues are not disappearing entirely from the political agenda, and environmentalism continues to shape the region's evolving political culture' (Peterson 1993:227). The initial support for the Greens at the time of independence was very important. It put environmental issues at the top of the political agenda for the first independent elections and it has allowed the Lithuanian Greens to begin to achieve what has taken groups in the West at least twenty years. Further, it is certain that environmental problems will remain for the Green Movement to continue to fight against. They will also turn their focus to the capitalist state as the movement has done in the West.

4.4 **Conclusion**

Theories of nationalism and social movements have been useful in elucidating some of the causes, influences, and hindrances to the development of cultural identity, the mass mobilisation of people expressing it, the role of green issues in that expression, the fate of the movements which achieved dramatic success in 1990/1 and, ultimately, to the development of environmentally sustainable society. The nationalist (or at least pro-independence) origin of both movements is a major cause of the decline in support for the Greens as well as the subsequent decline in government

action on environmental matters. The loss of large-scale opposition to environmental degradation most certainly influenced the priority given to it by governments. Also, since environmental issues were a platform for independence goals, it was easy for those within the Movement who were less concerned with environmental protection to move on.

Economic adversity has affected both the decline in support of the Greens and the direction of Government activity. However, there are other reasons for the decline in support and, as the following chapters demonstrate, for the more general direction of policies away from the concept of an environmentally sustainable society.

After the break up of the reform movement and the election of the LDDP Government, *Sajudis* still played a role in Lithuanian politics. The various groups and parties that have sprouted from the movement have aimed to take the *Sajudis* vision (or their variations of that vision) into the future. The Homeland Union headed by Landsbergis was prominent in opposition and, because of this, nationalism remained a political and cultural force in Lithuania right up until their re-election in 1996 (see 7.2.1.4). Likewise, it is not over for the Greens as a public pressure group, though the fate of the Green Party seems less certain. Environmental issues, as in the West, will continue to appear on the Lithuanian political agenda albeit more often on the periphery or only in the case of sensational circumstances.

In 1992, the Greens hoped to eventually find an appropriate place in Lithuanian society, similar to that of Western countries (Balbierius 1992:3). Since the restoration of independence and the subsequent downturn in support, the Green Movement (as an organisation) has indeed tended to become more like Green groups in the West, lobbying and petitioning the Government about various environmental problems. Skills and strategies have become similar to comparable organisations in the West so, while they may not initiate an environmentally sustainable society in Lithuania, they are no less important than Green groups in the West.

As the obstacles (see Chapters 5-7) to environmentally sustainable society (or indeed to a less ambitious situation whereby environmental issues are simply given more acknowledgment) are lessened over time, the issues should move from the periphery to a place of greater priority on the political agenda. In the short to medium term, however, those obstacles, including national

sentiment and the downturn in environmental action, as well as others discussed in the following chapters, will prevent the attainment of an environmentally sustainable society in Lithuania. In short, society has relatively quickly become similar to that in the West with economic issues being given a greater priority over environmental issues The reform movement has splintered into the various interests (particularly those with a nationalist basis) that fell into its ambit while the Green Movement has also fractured into smaller environmental groups, each with general areas of interest using various but typical methods of protest (see also 7.2.2.4).

Chapter 5: Economic Transition and the Environment

5.1 Introduction

There can be no doubt that Lithuania's economy is suffering but so too is the environment. Following the declaration of independence in 1990, inflation rose dramatically, total productivity decreased in real terms, while the standard of living decreased for the majority of citizens. These harsh economic conditions have been an influencing factor in the decrease in support for Green protests (see 4.3.1.2 and 4.3.4.1). The tension between economic development and environmental protection is not unique to Lithuania or the post-communist region. Unemployment, recession, pollution, and social inequity are now common throughout the world. These problems will become more intense in countries like Lithuania as they make substantial changes in the structure of society. It is, therefore, an opportune time to examine connections between economics and the environment in Lithuania which will help to formulate ways of integrating them into future policies. In Western economies, solutions to the recession have focused on more of the same (more trade, more deregulated commerce). Environment and social justice issues cannot be resolved, it has been argued, without an improvement in the economy. Lang and Hines (1993:7-11) suggest a more sensible position would be to acknowledge the connections between environment, economy, and social equity and look for solutions to all these crises together.

Although these issues are not peculiar to Lithuania, there are specific influences and limitations relevant to post-communist nations currently undergoing political, economic, and social transition. This chapter aims to highlight similarities and differences in economic systems (and how they impact on the environment) in order to understand the continuing environmental problems in independent Lithuania. In doing so, it will discuss the issues associated with economy and environment in the free market, communist, and post-communist systems and combinations of those systems. Although these systems have varying impacts on the environment, ultimately they are all based on an anthropocentric, development-orientated view of nature. Neither system, nor the philosophies on which they are based, can be seen as having a monopoly on environmental degradation.

This might suggest that industrialism is therefore the culprit. This chapter argues, in line with the observations made in Chapter 4, that it is the way nature is perceived and the policies that flow from that perception which are most significant in explaining the degree of environmental impact from economic activity. An analysis of the perceptions promoted by economic systems in modern Lithuania will help uncover whether there is any basis for an environmentally sustainable society.

Following from the discussion of the principles behind communism, capitalism, and various alternative systems, some details are outlined of these economic systems in practice (including the 'transition' period between the two) and their impact on the environment. The industry-based Soviet economy was resource-intensive with poor implementation of pollution guidelines, leading to large-scale environmental destruction in some regions. The environmental legacy left to Lithuania, although relatively clean compared with some other areas of the FSU, prompted much concern and cries for action (see Chapter 4). Some thought independence and a move toward a market economy would solve the problems. However, the subsequent economic crisis proved such hopes difficult to achieve. The problems remain. That is not to say that measures have not been taken to turn the situation around. (These are outlined in Chapters 6 and 7). Crucial to successful environmental rehabilitation and protection is a commitment to good policies which is difficult to obtain from governments (and the general population) in light of the perceived primacy of economic reform. An analysis of the Lithuanian economy since independence and its relationship to the environmental situation will highlight the link between economy and environment. This is, necessarily, presented from the orthodox economic perspective, using traditional economic indicators, since this is generally how it has been portrayed in the literature.

Section 5.4.2 provides some lessons from Central and Eastern Europe where the transition to capitalism began two years earlier. It has become evident that the imposition of free market principles on the old command economies failed to adequately take the social, political, and psychological legacy into consideration. Old structures, technology, and administrators remained and could not easily be supplanted by new models. Manser (1993) has demonstrated the implications of the free market system for the environment in the region. A similar chain of events is occurring in Lithuania. The aim of Lithuania to join the European Union has been the paramount political concern of 1993-6,

so a discussion of EU environmental policy, and the implications for Lithuania's environment and economy if membership is granted, will provide a future perspective to the continuum. Such future directions are important in ascertaining commitment to environmental protection and, therefore, the likelihood of environmentally sustainable society in Lithuania.

5.2 Linking Environment and Economy

Over the last thirty years, environmental awareness has grown and opposition to development on environmental grounds has become common practice around the world. Environmental legislation has attempted to ensure that the impacts of economic development are considered by planners and developers. However, this has been limited by a commitment to economic rationalism which tends to give a low priority to environmental considerations. Economists concerned with environmental impacts have attempted to resolve such conflicts by including the environment as an externality. While it is important that natural resources, for example, have an adequate economic value in order to provide incentive for conservation (something the Communist system failed to understand), the attempt to "value" nature falls short since the value of the natural environment cannot be expressed by economics alone. The concept of "sustainable development" has aimed at balancing economic and environmental concerns. The term has become popularised and its meaning subjective. However, the original concept remains valuable in attempting to conserve resources and minimise the impacts of economic development.

The relationship between economic development and environmental protection is not clear cut. It is not simply a case of economics impacting on the environment. Environmental protection often has economic benefits by, for example, conserving resources. Also, standard of living should not be measured purely in economic terms as the quality of one's environment is an essential factor in determining quality of life.

It has been claimed that the downturn in the economy has led to a reduction in pollution since production has decreased. In late 1992, for example, the Bulgarian Minister of Environment, Valentin Vasilev, claimed that economic decline was the main reason for the 30-40 per cent reduction in pollution, although closures also contributed to the drop (Manser 1993:74).

Does this mean that as soon as the economy improves that environmental pollution will increase? This does not necessarily follow. Initially it might mean an increase in pollution levels, but if the appropriate action is taken, the economy and the environment can improve together. The environmental problems of Lithuania are often seen as a result of Soviet industrialisation, with the emphasis on large production output, using old, inefficient technology. So it is clear that a decrease in production will produce less impact. A December 1991 report from East Germany pointed out that 'a lack of thorough technical reconstruction and renovation could mean that the resumption of production will cause a rapid increase in pollutant emissions' (Manser 1993:75). However, to increase production again does not have to increase pollution, if the old technology is updated and other less costly measures are taken (it must also be noted that there are difficulties with introducing new technologies; these are discussed in section 6.2.4.2). Some of the existing problems are relatively inexpensive to rectify while others will require large amounts of funding and a longer time-frame (see Fisher's five categories of environmental problems in 1.3). The economic downturn also 'offers an opportunity to cap energy demand before it rises again' (Baumgartl 1994:151) (see also Chapter 2). What will be required is planning and a commitment to ensure the reverse trend does not take hold. Baumgartl (1994:151) suggests that, as the decline begins to reverse, the implementation of more stringent environmental policies would help prevent a worsening of the situation.

The view that once the economy improves so will the environment (since there will be more money to use for environmental protection) is now common in Lithuania. Of course, there is no guarantee that when the economy does improve that more funding will be given for environmental problems - this will depend on priority and commitment to effective environmental policies. Chapter 6 reveals that government expenditure on the environment has decreased since 1995, despite the fact that traditional economic indicators (such as GDP and inflation rates) show general economic improvement since 1993 (see 5.4.3.1).

As Lithuania moves further away from the collectivised social and economic structure, disparity between rich and poor will increase dramatically. Lithuanian society will pursue the previously restricted rights of the individual and capitalistic economic development and, as a result, unemployment, inflation, and pollution will disproportionately affect the

population. Mason points out that the enormous task of economic reform will affect all aspects of society by seriously affecting the distribution of resources:

> Such a transformation, from state planning to market, affects almost every aspect of political, social, and economic life. It affects employees' jobs, their incomes, and their relationships with their fellow workers and bosses. It creates new institutions (like private banking) and destroys old ones (like planning agencies and ministries). And it affects the country's social structure by creating new classes (entrepreneurs, a middle class) and widening the differences between wealthy and poor (Mason 1992:87).

Free market economists might argue that everyone has the opportunity to increase their standard of living in the market economy and those who do not are either lazy or incompetent. But social and economic problems are closely connected. A sharp distinction between rich and poor is already becoming clear in Lithuania. Those who have the material possessions reflecting a higher degree of wealth are assumed to be part of an organised crime cartel known as the Mafia, although not having any connection with the Italian group (there is, however, a Russian connection) (see also 7.2.1.3). If this is true, what qualities does one need to succeed in the new system? Crime is a visible result of increasing unemployment and harsh economic conditions in which even those with jobs have difficulty in meeting basic survival requirements. Corruption, an embedded practice in a system of limited products and services, is also prevalent in the country causing many problems with collection of fines (including pollution related) and taxes from the fledgling private sector (see 5.4.3 and 5.4.3.2 and 6.3.1.2).

5.2.1 Valuing the Environment

When used in relation to economics, the term 'value' has a specific connotation, primarily a monetary one. Value is discussed in terms of the value of production, essentially the sum total of 'value added' (the price of inputs used) at each stage of the production process. This interpretation does not and can not include a notion of intrinsic value or indeed social value of the environment. Mainstream economics has not regarded environmental degradation as a serious problem, asserting that market forces will ensure higher prices and substitutes for depleting resources. For example, as the supply of hardwood timber decreases the price will increase making it more profitable to exploit softer plantation species (Hamilton 1994:55). The development of 'resource economics' attempted to cost the rate of depletion

of non-renewable resources (Hamilton 1994:56).

As environmental awareness has increased, public pressure has forced Western market economies to begin to include the environmental "costs " of economic activity but usually as an externality. By the 1980s it had become clear that traditional economics could not adequately address the increase in environmental problems. This led to the emergence of the field of 'environmental economics', the main premise of which is that the market is imperfect, leaving consumers unable to adequately express their environmental concerns through their market participation (Hamilton 1994:56). As Bruce (1981:13) points out, most nations have begun with the right to pollute which means that, in order for the market to counteract the effects of pollution, a lot of money and effort is required; as well as significantly high levels of pollution to worry consumers into action. This relatively new field of environmental economics still tends to take a traditionally rational approach to protecting the environment.

Valuing the environment using orthodox economic principles such as cost-benefit analysis leads to the premise that 'we should protect the environment insofar as its value to us exceeds the cost of preserving it' (Jacobs 1991:63). The problem with this method is that while it might be possible to measure the costs of environmental protection it is much more difficult to measure the benefits, particularly in economic terms. The potential impacts of economic development are difficult to ascertain and if it is impossible to calculate the costs of pollution, 'we cannot estimate the benefits of preventing [it]' (Jacobs 1991:65). An emerging branch of 'ecological economics' attempts to transcend the rational approach by integrating economics, ethics, and the environment (Hamilton 1994:56). It seeks to overcome the value-free notion of conventional economic theory by insisting that choices are dependent on the objectives and attitudes of the decision-makers (Ekins *et al.* 1992:30-1).

What differs in the FSU is that the impact of production on the environment was not even considered as an externality. Authors Pearce, Markandya, and Barbier (1989) have argued that economies and the environment interact, necessitating the valuing of the environment. It is argued that since natural resources have in the past had a zero price there has been no incentive for their protection, resulting in extensive resource depletion. In the FSU, no price was attached to the environment and since there were no competitive markets for the resources or resulting products, resource depletion was more

rapid and economies were extremely inefficient. Does this mean that the free market system is preferable in terms of environmental protection? It does not necessarily follow. Both systems fail to accept that valuing the environment in economic terms is impossible since the human desire, obligation, or need to protect nature goes beyond the bounds of the rational choice model (see 5.3.2). A Green approach to economics sees the market and the state as complementary rather than in conflict. The state has a role in setting the context of the market, correcting market failures, and redistributing wealth. The state in a Green economy works at the local, national, and international levels (Ekins 1992:34-5). In order to establish similarities and differences between the environment and the economy in Lithuania before and after independence, a discussion of the environmental impacts of these two major economic systems follows (see 5.3 and 5.3.2).

In conventional economics, price *is* value (Ekins *et al*. 1992:36). A price for resources is useful in terms of its influence over conservation, however, the value of the natural world cannot be adequately expressed through price. The process of discounting used in cost-benefit analysis assumes that future benefits are less valuable than present benefits. Economists explain this in terms of people preferring a dollar now rather than in five years time because of uncertainty, or the possible increase in salary which reduces the relative value of the dollar. This is much more difficult to apply to nature, the value of which tends to increase with time (Hamilton 1994:61). The placing of monetary values on environmental protection is complicated further where pollution is transboundary or global. It is not possible to accurately calculate the total costs of global warming or the benefits of rainforest protection, for example, making an estimate of the 'optimal' level of protection equally impossible (Jacobs 1991:66).

There is an even more fundamental reason why rational economics, and much of environmental economics, does not adequately value the non-human world. Both the free-market and command systems assume an anthropocentric (human centred) notion of the environment. An anthropocentric approach measures the environment only in terms of its value for humans (Jacobs 1991:66). While philosophers no longer need to explore the notion of human respect for other persons, the concept of a respect for nature has only begun. The assumption that only humans have an intrinsic value that demands respect and dignity (leading to a commitment to preservation) has resulted in a human-nature dichotomy where the

interests of humans preside over the non-human world (Eckersley 1992:1-2). The eco-centric position on the other hand stresses the intrinsic value of the non-human world and acknowledges the interrelatedness of all phenomena, thereby allowing for greater protection of the environment than is attainable from an anthropocentric position. Micheal Zimmerman has argued:

> If humankind is understood as the goal of history, the source of all value, the pinnacle of evolution, and so forth, then it is not difficult for humans to justify the plundering of the natural world, which is not human and therefore "valueless" (in Eckersley 1992:52).

As Eckersley (1992:52) points out, when these anthropocentric perceptions are 'combined with powerful technology, the capacity for environmental destruction increases dramatically'. The rapid industrialisation of the Soviet Union occurred at great cost to the environment and it is evident that the failure of communism to reconcile the conflict between humans and nature (see 5.3.1 and 5.3.2) can be found in the anthropocentric view of nature combined with a technocratic philosophy of production. Chapter 7 will discuss the associated political philosophies which drove the economic vision.

5.2.2 The Three Es - Economy, Environment, and Equity

Tim Lang and Colin Hines (1993), in their compelling challenge to orthodox free trade economics, argue that the economy, the environment, and social equity are at the core of the global challenge. Neither free trade nor conventional protectionism, argue Lang and Hines, offer solutions to these problems since economic development fails to 'meet human needs and to sustain the environment on which life depends' (Lang and Hines 1993:7). Economic depression is common throughout the world and, with the globalisation of production and trade, a new system aimed at narrowing the gap between rich and poor nations (and within nations) whilst protecting the environment must have a global perspective. That is not to say that such a system would be global in nature, only that it would consider impacts on all nations and their environments. It would encompass the notion of "think globally, act locally".

If the problems of social equity and environmental destruction are taken as given, what have been the benefits to justify these impacts? Orthodox economics tells us that a 'marginal utility' enables one to balance needs and impacts, taking the most efficient and rational decision. However, economic crises exist throughout the world in industrialised, newly industrialised

(NICS) and developing nations alike. Explanations for economic decline in industrialised countries tend to focus on social evils, modernising Victorian fears of crime generated from the lower class. Solutions focus on "belt-tightening", harder work, better training, and improved efficiency of companies in order to improve national economies, thus improving competitiveness in the global market. An "us and them" mentality prevails. Meanwhile other countries promote similar policies (Lang and Hines 1993:8). There are always winners and losers in free trade economics (whether it's Keynesian or more liberal). Each country aims to have a positive balance of trade but for every country in the black, at least one will be in the red. The major losers have been the developing countries in the South. The equity crisis, a result of economic practice, also needs to be considered.

Trade has brought benefits to the "winners" but many argue that global inequality is growing due to current trade practices. According to the United Nations Development Programme, 'the richest fifth of the world's population, by nation, today earns over 60 times more than the poorest fifth' (Lang and Hines 1993:8). Hand in hand with this inequality is a disproportionate effect of pollution on quality of life. The elite (the top two thirds in rich countries and, globally, the consuming nations) enjoy a high standard of living while, because of their high consumption, the poor suffer economically as well as environmentally. It is the poor who usually work in harsh conditions to produce energy and products and they usually live in the most polluted areas. As Herman Daly and Robert Goodland of the World Bank's Environment division have argued:

> As capital leaves a country in pursuit of greater absolute advantage, then that country loses both capital and jobs and becomes worse off....There may be good arguments for free trade, but in a world of international capital mobility, comparative advantage *cannot* be one of them (their stress) (cited in Lang and Hines 1993: 22-3).

The environment has deteriorated dramatically in the last thirty years and, while governments and companies have claimed concern about environmental impacts, 'their practices do not match their promises' (Lang and Hines 1993:9). The globalisation of trade has increased energy use as various goods are transported across the world. Proponents of free trade usually argue that issues like the environment and equity can be addressed once there is an improvement in the economy. To the contrary, Lang and Hines argue that the only way to address any of the three 'Es' is together. The economic crisis is in part due to the failure to include the costs of

environmental impacts of production and consumption (Lang and Hines 1993:9). The view that environmental problems can only be dealt with once the economy improves is common in Lithuania. As discussed in Chapters 2 and 3, the focus of governments has been on regaining economic independence often at the expense of the environment. Fisher (1992:1) points out that some environmental problems in the region are contingent on economic performance. It will be possible, he argues, to resolve some problems during the process of economic change and other more serious problems can be tackled when the economy has improved. There are other problems which might get worse or that will result from the process of change and the pattern of future development (see Chapter 1). It is the future path of development (and the extent of environmental consideration) that Lithuania chooses which is crucial for long term maintenance of environmental quality.

Lithuania is a second world nation aiming to rejoin the first world. While it is more advanced and in a better social and economic position than many of the 'losing' developing nations (in terms of such indicators as housing and industry), it has many hurdles to clear before it can rejoin the international community. Countries like Lithuania have a mixed legacy from their incorporation into the USSR. Industrial development and military clout placed the USSR in the realm of the first world but the indiscriminate exploitation of resources, the pollution from the inefficient technology, and the quality of life of many citizens resembled (and probably more so now) that of a third world nation. The seceding nations now face problems related to both worlds. They have to find ways of dealing with pollution from high-technology such as nuclear facilities while at the same time finding ways and capital to provide basic services such as sewage treatment and garbage collection. A major focus has been on developing ties with the rest of Europe (particularly the West) which has led to the signing of a free trade agreement and a push for inclusion in the European Union. The post-communist region, desperate to increase exports and join European and international trade, may replace Africa as the 'loser' of trade relations in the region.

The impact of trade on the local economy was evident in Lithuania during the years 1992-1994. The European countries want to establish trade with the post-communist region, but only on their own terms. Although many of the trade barriers have been eased, the European Union and European Free Trade Area 'maintain tight restrictions on the most competitive products

from Central and Eastern Europe - products in which the region has a competitive edge' (Business Council For Sustainable Development 1994:35). Thus, imports to the region from Western Europe have been growing by around 30 per cent per year while exports have not been matched with tariffs set at 100 per cent or more on agricultural products (BCSD 1994:35) (see 5.4.4). The influx of European lifestyles and associated goods (often out-dated, unwanted, or low quality) was gradual at first and dramatic from 1992 -1994, symbolically represented by the introduction of the modern supermarket. (Carrots, for example, formerly supplied by local growers, were suddenly replaced by a washed French variety pre-packaged in a plastic bag). The arrival of the supermarket seemed to represent both economic recovery and enlistment into the family of Europe. While citizens (and returning visitors) were amazed at the diversity of products available, only a minority could afford what was on offer and local produce seemed harder to find as growers too sought external markets.

It is estimated that one eighth of world oil consumption is used in the transport involved in international trade. The cost of the energy to the producer is included but the large amount of transport involved inflates prices which in turn affects those in the lower socioeconomic groups. The environmental costs (such as resource depletion and air pollution) of this energy are rarely included in the price of the product, giving no incentive to change such practices. The over-use of the world's diminishing resources is a critical problem, yet transport multiplies this effect by its significant contribution to air pollution, leading to global problems of acid rain and the Greenhouse effect (see also 5.4.4.2). Lang and Hines (1993:11) argue for a 'New Protectionism' which aims

> to protect the future through restrictions on international trade and by reorienting and diversifying entire economies toward producing the most that they can nationally, then looking to the region of countries that surrounds them, and only as a last resort to international trade....More long-distance trade will only intensify the damaging trends which are already bringing the world to its current sorry state.

The challenge is to develop policies which address the economy, the environment, and equity, thus reversing destruction and poverty around the world (Lang and Hines 1993:12). Crucial to such policies is "sustainability" (or 'self reliance' as Lang and Hines prefer to call it) where the emphasis is on diversity of production and retaining control over capital rather than 'letting it flow around the world in search of the highest interest' (Lang and

Hines 1993:12-3). Lithuania could do well to avoid the traps of international trade as experienced by the developing nations of the South. It has been argued that the South must avoid not only the supposed gains of free trade policies but also the notion of self-sufficiency behind national barriers since both lead to under-development (Lang and Hines 1993:13). Post-communist countries such as Lithuania should also heed such advice. In particular, given the necessity for foreign assistance in restructuring, they should be aware that only one third of the US$1 200 billion Third World debt to First World banks in 1990 was the original debt (Lang and Hines 1993:13) (see 6.2).

The New Protectionism stresses the need for the era of free trade to end. It argues for a shift in political thinking away from the free trade package, giving priority to equity and environmental protection; a decrease in international trade and an emphasis on regionalism - reversing the globalisation of production and minimising the use of transport; more intervention in the activities of Transnational Corporations (possibly through the UN); and, ultimately, for GATT[1] to become GAST, the General Agreement on Sustainable Trade (Lang and Hines 1993:14). For this to happen, what would be required is a complete reversing of current trends which cannot be achieved by a single country. Countries like Lithuania could choose to stand alone but this is unrealistic given that the system, dominated by the superblocs (EEA, NAFTA, Japan), is well established and the only course of action seems to be to link their economies to those existing trade patterns dictated by free trade ideologies (Lang and Hines 1993:40-1). However, the whole post-communist region might improve economically and environmentally through regional co-operation.

5.3 **Economic Systems and the Environment**

As with much theory there tends to be disparity between economic models and the way in which they are implemented. The mistake has been to assume that central-planning is synonymous with communism and that the market is synonymous with capitalism. Capitalist systems have developed in a variety of forms with varying levels of central planning (which have increased during wartime) including very large welfare states, such as found in Sweden, while socialist systems have, at the very least, charged a rate of interest for working capital. The tendency has been to identify systems

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1. The General Agreement on Tariffs and Trade.

purely by the criteria of ownership. As the Yugoslav and Swedish examples will show (see 5.4.5), ownership alone is not enough in identifying and comparing economic systems. Equally important are the functions performed by government, labour, and the private sector and the level of control placed on the latter (McFarlane 1991: 5-7). In addition, there are a number of factors which interrelate and contribute to the relative success or failure of any given system, such as the cultural, historical, and political context in which it operates. It is important to see the benefits and shortfalls of all systems, in relation to economic growth, equity, and environmental protection. Many Western economists are now acknowledging the inherent problems with capitalism and are searching for ways to achieve greater equity. The strengths of socialist economies are a useful starting point. However, the temptation in the countries of the FSU and CEE is to assume all factors of communism and socialism are problematic (indeed wrong) and therefore to be avoided. There are benefits, problems, and limitations to all systems. The focus here is on identifying a system that does not ignore social and environmental issues. Short of proposing total economic reconstruction globally, it seems appropriate to acknowledge the relative strengths and weaknesses of systems in theory and practice in order to extrapolate some features which might be implemented in Lithuania.

After the declaration of independence in 1990, the government of Lithuania set about economic reform primarily to change from a centrally-planned economy to a free market system. Although initially some governments in the region canvassed the possibility of a "middle way" between capitalism and communism this was generally abandoned in favour of a full transition to a market economy - a difficult task given that such a system had developed over decades, even centuries, in other countries (Mason 1992: 120). Some examples of mixed economies are covered in 5.4.5, pointing to some of the problems and possibilities for an integrated economy in Lithuania.

Problems have arisen due to the expectation that the transition to democracy would coincide with the establishment of a market economy. As Brucan (1992:19) points out, 'there actually is a striking contradiction between the two basic tasks'. Mason (1992:86-7) agrees, noting that changing the political structures is a much simpler task than economic reform. Parliamentary democracies were created in a few months, whereas, as Marx noted, everything in society was based on the economics "substructure" and only by changing that could society truly be transformed. Mason (1992:86-7) acknowledges

Marx's accuracy on this point since change has been painful and slow while the new economies develop. However, there is more to a successful political system than establishing parliamentary institutions. The understanding of rights and possibilities to influence decisions is not yet well established amongst the general Lithuanian population. The ill-developed democracy and political culture necessary for its working are discussed in more detail in Chapter 7, along with the enormous legal changes that were required to legitimise the new system. The focus here is on the impacts encountered by the initiation of the market economy.

The economic transition has led to a decrease in the standard of living which, at least initially, most people recognised as necessary for the short term. Five years on and the communist legacy of serious economic and environmental problems remain. Why? Lockean liberalism through to Marxist communism see economic activity as creating something valuable from something otherwise valueless, usually through technological progress (Eckersley 1992:23-5). The following sections will briefly discuss some of the elements of such philosophies relevant to environmental degradation and protection.

Whilst the enormity of the task of economic restructuring must not be forgotten, the problems are far from being resolved. Inflation is still high while real wages are not - only a few have reaped the benefits of the free market. Inequity quickly developed (see 5.4.3.1). Meanwhile, the environmental problems which were a focus for political dissent still exist.

The capitalist system (in all its varieties) developed over a long period of time. The less complicated economic recovery of Europe following World War II, for example, took at least a decade. In Britain, the sterling was not fully convertible for seven years during which food rationing and price controls continued (Mason 1992:122). The capitalist system only survived in the West through difficult economic times, such as the Great Depression, because of the mitigating effects of the welfare state and the legitimisation of trade unions (Galbraith 1990 in Brucan 1992:21). Society became sufficiently wealthy (through colonial exploitation and a beneficial trading situation with developing nations) to enable government agencies to redistribute some of the country's resources. Such sources of wealth are not currently available in CEE and FSU (Brucan 1992:21). Even so, the Western economists are urging a kind of capitalism on Eastern Europe that they would not entertain

in their own countries. Those pushing for private housing, for example, seem to forget the millions of homeless in western industrialised countries. As John Kenneth Galbraith pointed out, the West does not have the "traditional capitalism" that economists were selling to the East but "a still imperfect social democracy". He advised that the aim of both western **and** post-communist countries should be "to seek and find the system that combines the best in market-motivated and socially motivated action" (in Mason 1992:122).

Governments in the area have become increasingly authoritarian not least because the economic models will not work in the region without 'a firm hand'. According to Brucan (1992), the West tends to favour the market over democracy and is often prepared to ignore failings in the latter. Support from the superpowers and organisations such as the IMF is often conditional upon market orientated reforms (see also 6.2.4.5). For example, China is the only country in the East to make the transition to a market economy whilst achieving a relatively high rate of economic growth. Chinese Premier Li Peng was welcomed in the West because of these reforms, yet the authoritarian nature of governing and human rights violations in China are forgiven in the name of the market (Brucan 1992:21-4).

The problems with political reform, including the development of democracy and a political culture in the region, are discussed in Chapter 7. The perceptions of nature promulgated by the major economic systems, and the environmental impacts that flow from that, are discussed in the following sections.

5.3.1 Marx on the Environment

Although not dedicating any manuscripts solely to a philosophy of nature or humans' relationship to the natural world, Marx often referred to such a relationship when writing about the labour process (and the worker's alienation from that process) as well as his later investigations into economics. His central theme was the domination of "man" by "man", neglecting (to a point) the issue of "man's" domination of nature (as well as the domination of men over women in all classes). Some of Marx's comments on nature might be seen as positive in terms of the environment and a solid basis for an environmental ethic. Some Post-Marxist theorists concerned with the

modern environmental crisis (such as eco-socialists)[2] have seized on his statements as evidence of the ability of socialist ideals to solve the environmental crisis (even when that means some reworking of traditional interpretations).

Some theorists have replaced the traditional subject (the proletariat) with nature, which is similarly seen as exploited and in need of emancipation (Grundmann 1991:50). However, the foundation for Marx's comments on nature is a commitment to the project of human mastery over nature and a notion of value whereby nature only has value once it has been transformed by humans. Eco-centric theorists, unlike ecosocialists, find it unnecessary to seek a theoretical basis in Marxist thought for recognition of the inequalities of capitalism or the ways in which it has impacted on the environment (Eckersley 1992:76).

Marx (1844a) puts forward a concept of humans and nature as one:

> Nature is the inorganic body of a man, that is, in so far as it is not itself a human body. That man lives from nature means that nature is his body with which he must maintain a constant interchange so as not to die. That man's physical and intellectual life depends on nature merely means that nature depends on itself, for man is a part of nature.

Such a concept is superficially attractive in developing an environmental approach to production in that it stresses that humans are a part of nature and thus it could be argued, if humans destroy nature, they destroy themselves. However, the concept is anthropocentric since, according to Marx, while natural objects 'form a part of human consciousness' and are an 'intellectual means of subsistence', humans 'must first prepare [natural objects] before [they] can enjoy and assimilate them' and nature is the 'tool of [their] vital activity' (labour) (Marx 1844a:81). Thus the focus is on nature's importance to humans. Through the production process nature appears as the workers' reality and they can look at their image in a world they have created (Marx 1844a:82).

In the Marxist analysis of the relationship of humans with nature, the development of the individual (his or her 'species-being') is directly linked

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[2] Ecosocialism has been described as 'a concerted attempt to revise and reformulate the democratic socialist case in light of the ecological challenge' (Eckersley 1992:119). The ecosocialist position will be discussed in more detail in section 5.3.2.

with the understanding, appropriation, and mastery of nature (Marx 1857(1941) in McLellan 1977:380). The material world is 'filtered' through human labour rather than 'created' by it (Schmidt 1973:70). Labour is the process (in which humanity and nature both participate) by which nature is transformed, a process which is started, regulated, and controlled by humans, in order to 'appropriate Nature's productions in a form adapted to [their] own wants' (Marx 1865:455).

In the end, nature is there to be exploited. Engels recognised the implications of this, noting that we should not 'flatter ourselves overmuch on account of our human victories over nature. For each such victory takes its revenge on us' (quoted in Eckersley 1992:81). Marx occasionally made similar observations, yet both men continued to welcome capitalism for its role in preparing the way for the higher synthesis (the proletarian revolution) where advances in science and technology would enable humans to predict and control the environmental impacts of economic activity (Eckersley 1992:81).

An ecocentric approach to environmental protection cannot be extrapolated from Marxism without severely altering some of the major philosophical tenets, such as his theory of human nature (Eckersley 1992:94). That is to say, 'the Marxist circle of compassion (concern with social and economic justice) is but a subset of the Green circle of compassion (concern that all life forms be able to "live and blossom")' which goes some way to explaining 'the zeal with which the Left are prepared to pursue a road to social justice that wreaks havoc on the nonhuman world' (Eckersley 1987:25). The approach Marx took to the environment is important here for the purposes of historical context in the USSR and Lithuania and in illustrating that, in order to develop appropriate solutions to the economic, equity, and environmental crises, a fundamentally new approach will be required. The form this takes must be cognisant of particular cultural, historical, and political contexts and of the state of the environment. In Lithuania, the primary basis for a new economy is capitalism, as seems determined by the growing interrelationship of nations in the capitalist world order. Section 5.4.2 below indicates why popular economic models based solely on capital production and the profit motive are not necessarily the most appropriate for re-emerging nations such as Lithuania.

5.3.2 Communism or Capitalism: What Preference for the Environment?

Some post-Marxists and Greens point to capitalism as the root cause of environmental problems, while others argue that industrialism is at the heart of the problems. Still others might suggest that the prevalent anthropocentric perception of nature is ultimately to blame. Joe Weston, an eco-socialist, has argued that Greens should acknowledge that it is capitalism, rather than industrialism, that is responsible for the problems of environment and equity (Eckersley 1992:121). Marx criticised capital for first creating bourgeois society then the universal appropriation of nature and social relationships:

> Nature becomes for the first time simply an object for mankind, purely a matter of utility; it ceases to be recognized as a power in own right; and the theoretical knowledge of its independent laws appears only as a strategum designed to subdue it to human requirements, whether as the object of consumption or as the means of production....Along with the constantly diminishing number of the magnates of capital, who usurp and monopolize all advantages of this process of transformation, grows the mass of misery, oppression, slavery, degradation, exploitation (Marx 1857(1941):380 and 1865:487).

Some environmentalists might agree with such an analysis of the impacts of capitalism. Green leftists have often blamed environmental problems on the profit orientation of capitalism. For example, orthodox eco-Marxists (who have applied to nature the basic principles of the exploitation of humans by humans) also argue that capitalism is the main cause of environmental degradation. They argue that environmental problems are evidence of the inability of capitalism to provide wealth and security. Mandel wrote, 'the evil is private property and competition, that is, the market economy and capitalism' and similarly, Cohen argues, 'whatever the size of the problem would otherwise be, it is certain that capitalism aggravates it' (in Grundmann 1991:49-50).

Such an assertion tends to assume that the reverse would be also true: that, with the abolition of private property, environmental problems would diminish. If common property were the answer to social inequity and environmental ills, one would expect to find few problems in a country such as the USSR. But as is well known, many of these impacts can be observed in the Soviet Union, including significant environmental impacts (see 5.4.1). Thus, it could be said that it is not capitalism *per se* that is the root cause of environmental destruction. For example, Kassiola (1990), points

to an industrial crisis whereby the environmental and social consequences of industrialism are now more clearly understood by society. The environment movement, in highlighting the bio-physical limits to economic growth, have played an important role in this understanding (Kassiola 1990:32-3). Graham Dunkley asserts that while many leftists are sceptical of the anti-industrial thread in much of environmentalists' critique of capitalism, it is industrialism and capitalism that have led to current ecological crisis and it is, therefore, both that need to change (Dunkley 1992:3).

There is a difficulty in labelling any given nation in terms of the theoretical economic models. Certainly the USSR is a thorn in the side of those promoting socialist ideals. It might look more like 'state capitalism' or a 'social dictatorship' yet it is an example of a nation which built itself, or at least claimed to have done so, on Marxist principles. Thus it represents how, in one instance, such theories have been put into practice. There are several factors which make the USSR a specific case (see 5.4.1) - other communist countries have developed differently and have had varying impacts on society and nature (see 5.4.5). That is to say, each nation, regardless of which economic system it chooses, has a unique set of historical, cultural (including degree of ethnic homogeneity), and political circumstances which affect the development, relative success, and the type of social and environmental impacts of the system.

The Henry George Model, Geonomics, has been described by Richard Noyes (cited in Harrison 1991:210) as 'the dialectical "synthesis": the uniting of what is best in the western market tradition (the freedom of the individual) with what is best in socialism (the spirit of the community), to produce a *Weltanschauung* that is *sui generis*'. This model proposes the use of rent for land and resources enabling individual possession within the context of community (to which the rent is paid) and aiding the protection of the environment. George, writing in 1879, is seen as ahead of his times in terms of his warnings on resource exploitation and his attempts to develop a unique approach to economics (Harrison 1991:210) (see also 5.4.3.2). In modern times, new economic models have been developed in opposition to the traditional rational models of both communism and capitalism in an attempt to address the environmental degradation (see also 5.4.5).

Free market environmentalism (FME) asserts that ecological problems can be 'solved by the creation and enforcement of tradeable property rights in

environmental 'goods' and 'bads' which, they argue, leads to the most efficient allocation of resources' (Eckersley 1993:4). Further, 'it is not private capital but state regulation of, and 'political intervention' in, the economy (such as distorting subsidies, taxes or simply bad management) that is responsible for environmental degradation' (Eckersley 1993:5). The main argument put forward by FME protagonists is that private property rights depoliticise resource allocation and allow a personal stake in the environmental asset at hand. Governments, on the other hand, pursue political goals while the bureaucracy is inefficient (Eckersley 1993:6-12). Ultimately the market, too, is political. As mentioned above, if the starting point is a right to pollute then the market must be used to 'buy off polluters'. If, on the other hand, the premise is that pollution rights must be bought, the market can lead to a lower pollution level. The starting point of a government policy is based on values. 'Whether polluting is an industrial right or an imposition on society is a political question, the answer to which depends very much on our ethical position' (Bruce 1981:13).

The market may effectively and efficiently allocate resources but it falls short in distributing income and setting a sustainable level of the economy relative to the environment (Eckersley 1993:6-12). The free market is not a panacea for ecological problems - as the Lithuanian experience has demonstrated. In fact,

> the introduction of the market system also means adding "new" environmental risks to existing ones. The transition period, in general, was characterised by little enforcement of environmental control. Waste production alone, to give an example, increased significantly during the last few years. Far from offsetting past and future environmental threats, the new economic system may only add new problems to the deficiencies of the former systems (Baumgartl 1994:151-2).

Leftist thinkers have found themselves in a conundrum since while environmental problems are seen as closely connected with capitalism they recognise that such problems exist in all industrial societies (Grundmann 1991:48) So, the problems that developed under the Soviet system do little to support the notion that ecological problems are specific to capitalist societies. Eco-socialists, such as Weston, argue that the centrally-planned Soviet system is not an example of communism or socialism but, rather, of "state capitalism" (Eckersley 1992:121). This allows them to continue to focus on the profit mechanism of capitalism as the main cause of the problems. Emancipatory theorists point out that the environmental crisis is a result of industrialism which encompasses "state capitalism" as well as market capitalism, both of

which are concerned with growth and a faith in future technological solutions (Eckersley 1992:22-3). Whether referred to as "state capitalism" or not, the Soviet system in practice is quite different from theoretical ideals (see 5.4.1). Grundmann (1991:267), for example, argues that Marx may have even been opposed to the command economy if its 'side effects and irrationalities' conflicted with the 'conscious control' of human fate. He claims that a Marxist framework requires both markets and plans. Markets to transform labour from concrete to abstract and planning to establish the social character of labour.

The problem here is that the centrally-planned system of the USSR and CEE is the only type of communist society that has had a measure of 'success' and thus provides one of the few empirical examples by which to ascertain the environmental impacts. In order to grasp some idea of causal influences the focus needs to be on both the similarities and the differences between the systems. It may be that environmental degradation is more a consequence of industrial development, a feature common to both. Yet, the size and effects of environmental problems depends on three main variables;

> the population level, per capita consumption, and the environmental impact of the technology through which the consumption is delivered. Different technologies exhibit enormous differences in resource efficiency, pollution intensity, and in whether they reinforce or disrupt natural processes (Ekins 1992:52).

All these are directly linked. The per capita consumption, for example, is contingent on the resource-intensiveness of the technology used in production. Both the market and command economies exploit nature through technology while failing to value nature beyond using the price mechanism. The problems in societies based on these systems, however, have not been identical.[3] If, as is generally agreed, it is assumed that environmental degradation was more severe in the Soviet Union than in Western countries, there must be other factors which contributed to such a situation. The ill-considered use of technology is one factor in the severity of degradation under communism. The technology used in the Soviet Union did not keep up with advances in the West. Industry used economically and technically inferior technology with no concern for cost or quality (see 5.4.1.1). Such

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3. As the case studies demonstrated, the environmental problems in Lithuania and the political and economic climate in which they are to be resolved is somewhat different to that in Western Europe.

technologies would not stand up to Western economic or environmental efficiency measures.

> In other words, the capital equipment manufactured and installed in Eastern Europe [and the FSU] can be expected to require more inputs, and hence be more expensive to operate, than capital installed in a capitalist economy. This is one reason why the fuel and raw-material intensity of production is much higher in the East than in the West (Keren 1992:243-4).

As Grundmann (1991:46) has said, there is not a single factor responsible for ecological problems: 'The market and systems of common property may be equally beneficial or detrimental to the environment, depending on the concrete historical and cultural conditions'. While he argues this from an anthropocentric standpoint, I would argue that the perception of nature, which is contingent on historical and cultural developments (as well as specific economic conditions) is a key factor in understanding the link between economic systems and environmental degradation. It is such a perception that directs the formation of policy, establishment of protected areas, and the use of various technologies including whether or not it is important to improve the 'environmental friendliness' of production.

A Green approach acknowledges 'both the ecological and social limits to growth' and is therefore concerned with three interrelated goals - economic efficiency, social justice, and ecological sustainability (Eckersley 1993:9&17) (see also Lang and Hines' "three Es"). There is, of course, debate amongst Green thinkers as to the appropriate means to achieving these ends but most are critical of highly centralised systems that limit participatory democracy as well as those based solely on free market principles since, although social relations are different in these systems, the relationship between humans and nature tends to be the same. Greens are, therefore, 'concerned to find an alternative economic framework that ensures that the market is *subservient* to ecological and social justice considerations' (Eckersley 1993:10) (see also 5.4.5).

So, perhaps the fundamental difference comes not in the role of the market or private property but in democratic principles - the role of public participation in developing policy. The democratic process links public perceptions of nature with political action. This requires market forces which make it more profitable for industry, for example, to use cleaner methods or market incentives to encourage energy conservation as well as state controls in developing and implementing environmental and related social policies.

As Chapter 7 demonstrates, the political suppression of public opinion in the Soviet Union and Eastern Europe (together with the suppression of cultural identity as discussed in Chapter 4) is a crucial factor in the amount and types of pollution although not in the existence of the problems *per se*. In addition, the development of a democratic political culture will be fundamental to turning the environmental situation around (see 7.2.3).

5.4 Economy and Environment in Practice

As has been shown, the environmental impacts of economic activity have not been a major concern of the traditional economic models. Even so, some expectations of the relationship between economic development and the environment might be derived from the economic system in theory. It is also evident that there is often disparity between the economic model and how it works in practice since 'no social and political theory can be used by practical [people] in the shape given it by its authors; it must always be greatly simplified and often considerably changed' (Plamenatz 1954:318). This being the case, possible environmental impacts are even more removed from the realm of prediction. There are so many factors at play that a particular economic model may be seen as potentially more sensitive to nature but could become something completely different in practice. Therefore, an evaluation of economic systems as they are implemented in practice, and the environmental consequences involved, will highlight the way in which economic policies in Lithuania have affected the environment. The analysis begins with the economic system used in the Soviet Union, providing a historical context. This is followed by a discussion of the environmental consequences of transition in the CEE region, where the process began two years earlier and, therefore, should provide some lessons for Lithuania. This is compared with what has become evident in independent Lithuania, where a similar yet slower approach to reform was taken. An assessment of the relationship between economy and environment in the European Union provides a future perspective to the discussion since membership is a major economic and political goal for Lithuania.

5.4.1 The Soviet Union

As noted above, the communist economic system has its theoretical roots in the writings of Karl Marx. Communism was seen as the ultimate achievement for society; a trouble free existence. Marx expressed it as such:

> Communism is the positive abolition of private property, of human self-alienation, and thus the real appropriation of the human essence through and for man. It is, therefore, the return of man himself as a *social*, i.e. really human, being, a complete and conscious return which assimilates all the wealth of previous development. Communism as a fully developed naturalism is humanism and as a fully developed humanism is naturalism. It is the *definitive* resolution of the antagonism between man and nature, and between man and man. It is the true solution of the conflict between existence and essence, between objectification and self affirmation, between freedom and necessity, between individual and species. It is the solution of the riddle of history and knows itself to be this solution (Marx in Schmidt 1973:128).

However, communism (or more precisely Bolshevism) in the USSR did not originate from a proletariat-led overthrow of the bourgeoise as theorised by Marx. The system emerged in a relatively "backward" economy replacing Tsarist autocracy where there was virtually no history of bourgeois democratic institutions (Patnaik 1991:19). Plamenatz argues that it is precisely because Marxism was introduced before industrialisation that 'there never has been, and now probably never will be, either a bourgeois or a proletarian revolution in that country' (Plamenatz 1954:313). It is important to recognise this historical context in order to separate it a little from the egalitarian principles put forward by Rousseau and Marx.

It is argued that Bolshevism, though having roots in Marxist thought, can neither be called communism nor socialism in the nineteenth century meaning of the words (Plamenatz 1954:319). The Bolsheviks took the predictions of Marx on board and decided to leap the preceding bourgeois revolution. They began this, under the leadership of Lenin, by forming a proletarian party in a country where there was not a proletariat and accomplished in a few generations what, theoretically, should have occurred, through several stages, over generations (Plamenatz 1954: 328-9). The stages were to involve reform of the feudal system, with the rise of capital production creating the bourgeoise. This form of society would then be overthrown by the proletariat leading to a classless and stateless society (Jones 1992:12).

> The enormity of their ambition and the certainty with which they pursued it drove the Bolsheviks to reject all tradition in politics, all conventions in morals, all constraints of science. As heralds and engineers of a new age, they had not just overthrown the past but superseded its rules and limits (Feschbach and Friendly 1992:28).

Essentially, they 'declared possible what must be impossible, if theory is true; they... also created new kinds of inequality and oppression as extensive and self-perpetuating as the old' (Plamenatz 1954: 329). So, the style of

Communism that emerged so quickly in Russia was not so much successful Marxian socialism at work, as a result of the visions of ambitious and powerful people. The spread of communism from Russia to other parts of Europe during and following WWII was not due to its popular support but, rather, a consequence of Soviet military power (Plamenatz 1954: 327-9). So, while a Lithuanian delegation went to Moscow to "ask" to be incorporated into the Soviet Union, they were in fact unwilling supporters of communism.

The autocratic system that existed prior to 1917 is also an important factor in the style of communism that developed. Marx envisaged the proletarian revolution occurring in an established capitalistic democracy. The secrecy required by Lenin and his party in a police state had significant implications for its workings and the lack of democratic principles that followed (Plamenatz 1954:324) (see 7.2.2.1).

Lenin adhered to Marx's notion of nature discussed above; 'the dialectical-materialist view that [humans], whatever historical conditions they live in, see themselves confronted with a world of things which cannot be transcended and which they must appropriate in order to survive' (Schmidt 1973:63). While it is reasonable to argue that humans must 'appropriate' certain matter from nature to ensure survival, the means and extent of this appropriation is the key concern. Can the production of an ever increasing amount of goods, together with the waste, pollution, and habitat and species loss that results (i.e. from capitalism or communism), be justified as necessary for the survival of humanity?

Communism, as it has been borne out in practice, 'must be seen as an aberration rather than an example of the inherent tendencies or "logic" of a planned economy' (Eckersley 1992:137).

> The old Stalinist economic model was a politico-ideological construct, in which social (dictatorship of the proletariat) and political (party monopoly of power) considerations overshadowed economic [and environmental] ones. Economic data were tailored to fit ideological claims; the whole economic picture was a big hoax, but the painting was so well done that even Western economists were sometimes taken in....[T]he demolition of that monumental hoax is not only a daunting economic and social undertaking but also a psychological trauma for the people involved (Brucan 1992:19).

The contradictions between German Marxism and Russian Communism (particularly in the use of violence and the oppression of the workers) is an important distinction for the issue of social justice yet perhaps it has little

relevance in terms of the environment. As has already been discussed, socialism/communism (in theory and in practice) has no better record for acknowledgment of the nonhuman world. While environmental issues might not be expected to be considered (and the extent of environmental destruction foreseen) during these developments from 1902-1917, and even later as the Soviet system grew, it seems the Soviet system also failed on the central issue of equality. As Plamenatz explained in 1954, 'the Bolsheviks, though their achievements are great, have brought more suffering to the workers and peasants than to any other class' (Plamenatz 1954:330). He went further to point out that in their efforts to make Russia a rich country they were willing to sacrifice the welfare of the people to their 'future aggrandizement' (Plamenatz 1954:330). It is this aggrandisement in the pursuit of industrial development, together with the lack of a structural system for public participation, that was at the core of environmental destruction in the USSR.

5.4.1.1 Industrialisation and Resource Efficiency

An official tenet of the Marxist-Leninist ideology was that socialism, contra capitalism, was able to avoid the ecological costs of modern society because they could be taken into account in the so-called rational process of economic planning. Reality proved otherwise (Nørgaard and Pedersen 1994:100). The excesses and inefficiencies of the resource-intensive Soviet system, as outlined in section 2.2.1, were acknowledged from within during the late 1980s. In 1990, Soviet scholars estimated that the economic cost of environmental degradation in the 1980s was approximately eleven to fifteen times greater than the amount spent on environmental protection. Those calculations did not include the cost of illness (including sickness benefits and production forgone) much of which was associated with pollution and which accounted for around four million Soviet absentees each day (Feschbach and Friendly 1992: 254).

The most inefficient aspect of the Soviet economic system was that industries were developed to accommodate the whole of, or large regions within, the USSR. Huge factories were designed to produce one product, or even a single part of a product, for the region. These parts would be passed on from republic to republic for value-adding (Lieven 1993:334). Such practices, designed to ensure interdependence amongst the republics and thereby hinder secession, significantly increased costs and pollution. For example, a group

of factories in Kaunas produced every single television tuner in the Soviet Union (Lieven 1993:334). Thus, the new countries have in place factories with capacities well above their domestic needs (such as Ignalina NPP) and a reliance on inputs from elsewhere in the Soviet Union, the supply of which has been disrupted or halted.

Environmental costs were not even considered as externalities in the Soviet Union where the entire economy was included in a 'gigantic monofirm'. The lack of agencies, which in capitalist economies help alleviate social and environmental costs, meant that environmental impacts were not considered. Those environmental agencies that were formed had a very low standing in the bureaucracy. Incentives mechanisms for fulfilling targets were offered independently from the use of resources in the process (Nørgaard and Pedersen 1994:100). The mentality where production targets are more important than economic efficiency and ecological sustainability is still firmly entrenched in the system. 'Therefore, the negative investment in the environment is very difficult to halt, and the cumulative damage to the environmental capital cannot be remedied in any brief period of time' (Keren 1992:245).

5.4.2 Environmental Consequences of the Market: Lessons from CEE

The CEE countries that abandoned communism after the revolutions of 1989 provide an example for the FSU countries following in their path 2-3 years later. Already it is clear that similar processes, policies, and impacts have developed in Lithuania as experienced in Poland, Czech Republic, Bulgaria, and Hungary. Despite the intrinsic belief of many of the right-of-centre leaders in the CEE that the free market system would 'succeed where communism had failed', the transition left unchanged many of the 'economic and social structures inherited from communism' (Manser 1993:147-8).

There seems to have been an imbalance in the policy directions. Thus, while old polluting coal-fired power stations remained in operation, governments were promoting investments in the nuclear industry, leaving little incentive to conserve energy or develop renewable sources. Production targets took precedence over energy efficiency. Less expensive technologies were used in preference to cleaner, modern solutions (Manser 1993:148-9). As Chapter 2 demonstrates, the Lithuanian government has committed itself to a new oil terminal which has been criticised as economically and environmentally unsound. The support for the terminal is contrasted with

the argument that, due to the recession, funds are not available for decommissioning Ignalina or for seriously developing alternative energy sources. Meanwhile, the consumer-orientated promotion techniques used by Western companies to sell more cars and household products in the CEE undermine moves to reduce transport emissions and the phosphate content of sewage (Manser 1993:148-9). Around sixty percent of air pollution in Lithuania is derived from transport and the phosphorous content continues to be a problem in the face of inadequate sewage treatment (see Chapters 2 and 3). Therefore, active promotion of foreign consortia which use such techniques may have a more significant impact on the environment than in Western countries where environment agencies have been established and measures have already been put in place to withstand some of the impact. Foreign assistance has also been unevenly spread. Hundreds of millions of dollars have been granted for economic and structural reform in the CEE while comparatively small amounts have been directed toward environmental rehabilitation (Manser 1993:149, see also 6.2.1.1).

Despite the rhetoric of developing a "third way", the governments of CEE tended to follow in the footsteps of the West, a trend that the Baltic States have continued. Western advice to the CEE and FSU directed the new leaders away from more radical, environmentally sensitive policies. Manser (1993:149) contends that:

> [r]adical environmental policies which would have enabled the region to overtake the West and provide an economic and environmental infrastructure for the 21st century were considered inappropriate. Thus zero import duties on turbines for small hydroelectric power plants, costly royalties on the exploitation of non-renewable resources, road charging and tax breaks for households investing in energy saving were all rejected, partly because there was no Western example to follow.

It seems that the rhetoric over both the importance of environmental protection and the need to develop the economy without sacrificing the environment was short lived such that 'the apparent strength of this universal commitment to the environment quickly faltered, and a very different picture emerged' (Fisher 1992:7) (see 5.4.5). Rather than taking advantage of the commitment and spirit of the population following the 1989 revolutions as an opportunity to avoid the environmental and economic mistakes of the West, the CEE governments (followed closely by those in the FSU) chose instead to mimic them. The acceptance of ideal models unsuited to the specific problems of the region has threatened to make the impact of such mistakes much worse. Acknowledgement that economic and environmental

reform must go hand in hand was replaced by a perception that the major role of government agencies was to clean up after industries. 'In other words, the clear pro-active environmental remit of the quiet revolutions was replaced by a retro-active approach' (Manser 1993:150).

5.4.2.1 The Environmental Action Plan for Central and Eastern Europe

There has been no evidence that recommendations drafted at the first Environment for Europe conference held in Czechoslovakia in 1991 have been implemented. Further recommendations were made for integrating environmental considerations into economic reform at the second conference in Switzerland in 1993 (Manser 1993:151). According to Baumgartl, it is evident that the Environment for Europe Process has 'definitely shifted into a lower gear' in comparison with the broader intentions of the first conference (Baumgartl 1994:147). The 1993 recommendations were outlined in the Environmental Action Programme for Central and Eastern Europe (EAP) which has been criticised for being 'overly optimistic about the positive impact of market reforms and industrial restructuring on the environment' since without effective environmental policies the market cannot facilitate restructuring (Pesko 1993 in Manser 1993:151). The programme assumes that economic measures such as paying for pollution, debt for nature swaps, or increasing energy prices would be enough to reduce impacts. However, what is not clear is how such a programme could stimulate the development of renewable energy sources, organic farming, eco-tourism, or triple glazed windows for example, needed to support the economic measures if the environmental situation is to be turned around (Manser 1993:151). In other words, the level of commitment to programmes is not only reflected in the financial and technical transfers. A supportive infrastructure is necessary which is mindful of the interrelationship between economics, society, and the environment. It is, therefore, essential that new programmes are 'backed up with vigorous implementation and evaluation; their political credibility is undermined when this kind of support decreases' (Baumgartl 1994:147).

Another criticism of the plan has been that it fails to recognise the differences and specific needs of the included countries as it treats the region as a single unit. Further, it has been criticised as being politically driven rather than an action plan designed to improve environmental quality (Gyulai 1994). As discussed in section 6.2.4 and later in Chapter 7, there are economic and political limitations to successful implementation of national and

international environmental schemes.

The environmental ministers at the conference (European, G-24, ex-USSR) 'adopted a declaration that "endorses" manifold measures but "adopts" very few of them' (Baumgartl 1994:148). Commitment being the difference between the two. The commitment to the recommendations of the EAP is questionable given the substitution of the term "project preparation committee" for "project preparation facility". The planned facility would have been a new institution overseeing environmental projects in CEE with a capacity to implement the immediate action programme, requiring a strong commitment. The amended committee may be less susceptible to politicisation and bureaucratisation but it has 'no authority, capacity, or power to push forward and implement projects quickly' (Baumgartl 1994:147). The EAP necessarily involved compromise and the formulation was cautious and diplomatic, with a focus on creating guidelines.

Baumgartl (1994:147)argues that the inclusion of viewpoints from CEE experts and NGOs provided a more realistic framework for the EAP and this was rewarded by its general acceptance. If implemented, says Baumgartl, the programme could dramatically improve the environmental situation in CEE, however, the implementation cannot be carried out by its authors and the environmental threat will continue for at least two decades since governments are not supporting it with an adequate infrastructure.

5.4.3 Independent Lithuania

As the examples in Chapters 2 and 3 demonstrate, the economy and the environment are closely interrelated in Lithuania. The common catchcry of "for Lithuania's economic independence" took precedence over earlier commitments to environmental protection. Given the arduous economic circumstances following the reinstatement of independence (see 5.4.3.1 below), it is difficult to condemn the Lithuanian government, other governments in the region, or the Lithuanian public for making economic progress their primary concern. At the time, when the extent of environmental destruction in the USSR was revealed to the West, environmentalists pointed to the need to improve the situation. But a year or so after regaining independence it became more difficult for Lithuania to remain committed to environmental rehabilitation in the face of rising inflation.

During the first period of independence in 1918-1940, Lithuania's economic development was seen to be on a par with some Central European and Scandinavian countries. Lithuania was predominantly agricultural, exporting poultry and pork products to Germany, the United Kingdom, and Scandinavia while importing machinery and other industrial products. A macroeconomc equilibrium was established relatively quickly and was sustained throughout the interwar period (including the Great Depression) and the currency was one of the strongest in Europe (Samonis 1996:141). In trying to enter Western markets now, Lithuania faces greater internal obstacles than they did in the 1920s. They also have more significant barriers from the West (Lieven 1993:332).

When Lithuania was incorporated into the USSR, the economy was transformed until, by the mid-1950s, it was barely distinguishable from elsewhere in the Union. All major economic processes and activities were undertaken by the All Union Government in Moscow. The Soviet approach to production, particularly "storming"[4] to meet production targets and subsequent inflationary pressures, resulted in significant inefficiencies (see 5.4.1.1) which were reflected in the liberalising Lithuanian economy of the early stages of transition. Once the system was 'freed' from its artificial structures, inflation skyrocketed (World Bank 1993:3 and Felmingham 1992:104). Thus, they not only had the unprecedented task of transforming their economies from plan to market, but they had a rather depressed situation from which to begin. However, it was the same central government that established some relatively sophisticated industries in the country, such as machine building and metal working which became the main export industries with the textile, leather, and agricultural industries also being important (World Bank 1993:4) (see also 5.4.1).

The gradual relaxation of central control over Lithuania's economic activity in the 1980s did not stimulate an economic revival, primarily because the basic economic system remained the same. The World Bank (1993:4) noted that:

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4. This refers to the habit of storming (or rushing) at the end of each production period in order to meet subscribed targets. This means that the next step in the production cycle (typically at another factory, even in another republic) is also confronted with larger amounts of inputs at certain times, resulting in troughs and peaks in the cycle (Felmingham 1992:104).

> increasing political and economic turmoil in the entire Soviet Union and, in particular, the lack of effective enterprise control, intensified macroeconomic imbalances and led Lithuania's economy, an indeed all the economies of the FSU, into an unprecedented crisis.

Since independence, this crisis has intensified and Lithuania has been faced with incredible increases in prices and inflation (up to 1160 per cent per annum), disproportionate rises in wages, declining production, supply shortfalls (primarily from Russia), and increased unemployment. As a result, during 1990-1992, GDP fell by an average of 19 per cent per year (with a decline of 35 per cent in 1992), while energy shortages and rationing of goods and services compounded the effects for the local population (World Bank 1993:4-5) (see 5.4.3.1).

The fragility of the new independent governments in the CEE (and this is equally applicable to Lithuania) limits them to a very short term perspective while the variable interest rates constrain long term investment plans, including environmental projects. There are also significant pressures from industry lobbies. As Fisher (1992:9) notes; 'Such a situation militates against the implementation of any policy which requires the complex synthesizing of abstract and long-term interests, such as environment and development'. The attitude of those in government (and indeed that of the general population) is summarised by a statement from Yuri Shcherbak a year before he became Ukraine's environment minister: 'It's rich countries that can allow themselves the luxury of comprehensive environmental protection' (in Feschbach and Friendly 1992:253). However, the inseparableness of environment and economy means that 'without cleaner air, purer water and agriculture less dependent on dangerous chemicals, advances in other measures of social and economic well-being could not be sustained' (Feschbach and Friendly 1992:253-4).

Whether it is the more obvious connections such as the production and supply of energy or the less apparent link between forest protection and tourism potential, the relationship is not unidirectional. The latter is certainly an opportunity for Lithuania as the many lakes and afforested areas are rare in Europe. The tourism ministry is acutely aware of this with some promotional material emerging which emphasises Lithuania as a place offering history and nature. However, a lot still needs to be done to attract tourists from Western Europe and abroad.

5.4.3.1 Economic Review 1990-1996

Much has been written on the economic situation in the Baltics and other FSU and CEE countries since the end of communist rule. It has been an underlying assumption so far in this thesis that there were adverse economic conditions in Lithuania following the restoration of independence in 1990/1. The aim of this section is to briefly, and by no means comprehensively, outline the economic situation and thereby provide evidence of the assumed economic hardship referred to earlier which has been a contributing factor in the decline of the Green movement, the decreased urgency in environmental decision-making, and the push towards economic rationalist policies. However, again, it is only one of a myriad of issues which have led to the decline in the perceived importance of environmental issues and to the complexity of the reform process in which environmental policy must be formulated.

A blueprint for economic independence was developed in 1988 (see also 4.3.3.2) and adopted by the Reform Movement, Sajudis as an essential component of political independence. It stated:

> the time has come to design and implement the system of sovereign Lithuania's economic organization and management which would be capable of raising the unjustifiably low living standards and of assuring the appropriate satisfaction of social and spiritual needs of all the social strata (in Samonis 1996:142).

Fundamental to such aims was the economic sovereignty of Lithuania from the USSR. The blueprint proposed the reintroduction of the national currency and the establishment of a national bank with the usual powers of regulation and analysis of such banks in market economies. The Bank of Lithuania was established in February 1990 (Samonis 1996:143). Whilst economic sovereignty need not mean a market economy (see 5.4.5), this has been the path taken by Lithuania. There have been serious economic consequences for Lithuanians and the 'unjustifiable low living standards' referred to in the blueprint worsened. A UNICEF report claims that the reforms in China, which have been slower and have not aimed for a 'full-fledged liberal model', have produced more positive results in terms of income distribution, poverty, and child welfare than have resulted in the CEE/Baltic region but admits that another path was severely restricted (indeed rendered impossible) by the political disintegration (UNICEF 1995: 55).

The worst years seem to have been 1991 to 1993 when Lithuania experienced an economic recession due to the contracting export market in the East and a reduction in domestic demand due to the declining real income of the population (Kalinauskas and Kaminskiene 1996:10). During this time, inflation rose from 380 per cent (1991) to 1160 per cent (1992) and 190 per cent (1993). Meanwhile real industrial output decreased from minus 5 per cent to minus 52 per cent and minus 46 per cent respectively (Samonis 1996:145) and GDP fell by as much as 35 per cent. Whilst changes in producer prices impacted on inflation levels, the fundamental factor was a shortage of currency (Markelevicius 1996:38). Markelevicius, therefore, argues that the re-introduction of the litas in July 1993 was most influential in controlling inflation as well as the introduction of a currency board which regulated the litas according to the US dollar. Samonis (1996:156) has questioned the value of such a board in the Lithuanian case, particularly since inflation was already dropping and the litas was appreciating. Markelevicius (1996:38) argues that despite the negative consequences of the currency board it did have a significant role in decreasing inflation.

The supply shortages of inputs, particularly energy, caused problems for the already inefficient industries. Construction, transport, and other material services were hardest hit. Agriculture's share in production fell from 35 per cent to 17 percent during 1990-1991 while industry temporarily rose to 60 per cent but then was drastically reduced by around 50 per cent within the first half of 1992. The shortage of goods, which led to a period of rationing[5], together with rising prices and the comparative decline in real wages, led to a sharp decline in private consumption and in overall investment (World Bank 1993:5).

The relatively fast pace of price reform had temporary benefits for Lithuania's trade balance in 1991. The price of exports was increasing faster than the imports from the FSU, resulting in a trade balance shift from a deficit of 9 per cent in 1990 to a surplus of 9 per cent in 1991 (World Bank 1993:7). However, the price reform in Russia the following year which led to the switch to world market prices, essentially reversed this situation and the trade balance began to fall (World Bank 1993:7 and Markelevicius 1996:47). The oil prices were especially difficult for Lithuania to cope with and the resulting 'trade shock' has been described as more severe than the Western

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5. Rationing was enforced on items such as butter, sugar, flour, and cereal.

oil crisis of the 1970s (Samonis 1996:150) (see Chapter 2). Lithuania also recorded budget surpluses in 1991, 1992, and 1993 which Samonis (1996:148) accredits to 'the most conservative and sound [fiscal policies] in the world, perhaps in continuation of the interwar tradition'.

By 1994, general economic indicators had begun to improve. GDP began to increase which is attributed to a growth in trade and the services sector in 1995, accounting for 26 per cent and 59.9 per cent of GDP respectively. GDP was expected to increase by 4 per cent in 1996 (Kalinauskas and Kaminskiene 1996:10). Inflation, too, has been declining. In 1994, it had declined to 45 per cent and to 35.7 in 1995 (Lithuanian Department of Statistics 1996a:6-7).

The contribution of agriculture has continued to decline and, by 1995, it represented about 9.5 per cent of GDP (Kalinauskas and Kaminskiene 1996:10). This is due in part to the pressure of the EU trade agreements and the limit of 8.5 per cent on agricultural production for membership consideration (see 5.4.4 and 7.4.1.4). The EU's Common Agricultural policy in general will be a 'curse for the Balts as for the rest of Eastern Europe' (Lieven 1993:332). The trend away from agriculture is also evidenced in the structure of investment proposed under the national Public Investment Programme 1996-1998. The agricultural sector receives only one per cent of allocations. The environmental sector accounts for a significant proportion of the programme, primarily due to capital costs associated with waste water treatment (Kalinauskas 1996:19). It remains to be seen whether the new conservative government which came to power in October 1996 will continue to support the environmental sector (see also 6.3.2.2).

Average wages continue to improve but still remain much lower than elsewhere in Europe. Average wages increased from 316 litas (USD 79) per month in January 1995 to 485 (USD 121) litas per month in 1996. Approximately 74 per cent of this is absorbed in food, rent, heating, and electricity. While wages and pensions typically constitute around 50 per cent of a Lithuanian household's disposable income[6], it indicates the difficulty faced by most families, particularly in the winter season when heating costs are at their greatest.

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6. Other income is primarily generated from self employment (selling of garden produce for example) but can also include income from rent and welfare benefits (Lithuanian Department of Statistics 1996a:40).

Unemployment has increased significantly following the restoration of independence due to the removal of artificial Soviet job structure and declining production. This was initially controlled by restraints on administrative lay-offs and remained below one per cent in late 1992 (World Bank 1993:6). In May 1996, the national unemployment rate had increased to 7.4 per cent with some regions registering 14-18 per cent unemployed. Most of the registered unemployed belong to the 30-49 age group (54.6 per cent) followed by the under 24 age group (16 per cent) (Lithuanian Department of Statistics 1996a:32-3). Employment levels have also been affected by the decrease in population and a decrease in the proportion of 'able-bodied persons' (Gruzevskis and Misiunas 1996:24).

Pensions are allocated on the basis of a base pension which, according to law, must be at least 110 per cent of the minimum living standard (90 litas per month as at June 1996). The average retirement pension amounts to 180 litas per month (USD 45), significantly below the average wage (Lithuanian Department of Statistics 1996a:11).

An evaluation of the economic performance of the Baltic States in 1995 showed that Lithuania had a lower standard of living than Estonia and Latvia. While the 25 per cent inflation target was, quite rightly, seen as optimistic, Lithuania's long term prospects are viewed as reasonable given the large domestic market. According to Lucas (1995a), the aspect requiring most change is the attitude within the state bureaucracy (Lucas 1995a) (see also 7.2.1.3, 7.2.3, and 7.4.4.1).

5.4.3.2 Privatisation

As discussed above (5.3.1 and 5.3.2), the abolition of private property was an integral feature of the communist system. Thus, privatisation becomes fundamental to any transformation of that system. Aside from North Korea and Cuba, all command economies have undergone significant changes in economic, political, and social policies (UNICEF 1995:54). The extent and time frame of and the way in which this is carried out, is significant in terms of its social, economic, and environmental implications. As Dharam Ghai (1995:6), Director of the United Nations Research Institute for Social Development, has argued, the introduction of the market and the privatisation of state enterprises in the CEE region 'has been accompanied by reduction or restraint in government expenditure, often involving cuts in social services,

welfare and security and the phasing out of subsidies on items of mass consumption.'

Henry George argued for guaranteed possession based on a rental system whereby 'the rental value of natural resources would be sufficient to finance socially-necessary expenditure' (Harrison 1991:207). Such a system would aim to retain the communal spirit of socialist philosophy while at the same time securing some benefits of free enterprise and avoiding the cyclical recessions that afflict Western economies. George was also aware of the problems of resource exploitation, arguing that full rent to the community for the privilege of exploiting finite resources would in turn conserve nature (Harrison 1991:207-8). Harrison argues that '[t]he Western tenanted sector works as efficiently as the owner-occupied sector, so private ownership is not a precondition for kick-starting the economy in the direction of the free market' (Harrison 1991:212). Samonis (1995:149) disagrees: 'privatization and the associated demonopolization is by far the most important element, indeed the backbone of transition from plan to market'.

Poland's now famous "shock therapy" involved massive and speedy privatisation while Lithuania followed suit, albeit eventually at a slower pace. Initially, Lithuania was seen as one of the most aggressive privatisers in the post-communist region. The Primary Privatisation Law of March 1991 established a voucher system for Lithuanian citizens in order for them to purchase homes, shares, or bonds (Samonis 1995:151, Berliner 1992). Initially, the scheme was egalitarian, with limits on individual investment. This meant that around 10 people would be needed to by a small shop. Under Western pressure, as well as the practicalities of the process and the need for hard currency, the egalitarianism was modified and by the end of 1992 it had disappeared (Lieven 1993:341). By 1992, over 50 per cent of enterprises had been privatised, representing over one third of Lithuania's productive assets (Samonis 1995:146, 150). This pace was slowed somewhat on the election of the LDDP Government in October 1992 (see 7.2.1.2). The Government halted the privatisation process for two months, resuming it in the winter of 1993 and hastening it toward the end of 1994 (Samonis 1995:151-2).

In 1991, Fred Harrison (Director of Incentive Taxation in London) had warned that 'by adopting the western model of property rights in land, the Soviets would recreate the social divisions, anchored in the power of land ownership,

which caused the revolution in 1917' (Harrison 1991:215). It has been estimated that Lithuania suffered one of the steepest increases in poverty levels (along with Bulgaria, Romania, Moldova, and Azerbaijan, with Estonia and Latvia not far behind) during the 1989-1994 period. In 1994, around 39 per cent of the Lithuanian population was in poverty compared with around 1.5 per cent in 1989. A further 26 per cent were affected by low incomes which, although over the absolute poverty line, limited full participation in social life (UNICEF 1995: 7-8).

The liberalisation of markets world wide, it has been argued, has had a contractionary impact on the economy leading to an increase in poverty and unemployment as well as the associated symptoms of social disintegration such as crime, violence, drug abuse, divorce, stress, and alienation which, in turn, 'provide fertile ground for the escalation of social conflicts and the generation of authoritarian regimes' (Ghai 1995:7). The privatisation process has so completely absorbed the post-communist economies that they are in danger of relinquishing state controls and assets still held in Western democracies. Up until June 1996, Lithuania was the only Baltic State not permitting foreign ownership of property (Lucas 1995a). Estonia is in the midst of a large-scale privatising process (including transport, telecommunications, and utilities). The process is slowing now but when complete (with assistance from the EU's PHARE programme), Estonia will have one of the most privatised economies in Europe (Lucas 1995).

The transfer of ownership of state enterprises in CEE and FSU is more complicated than the privatisation of government services in the West. It involved several dimensions: allowing the formation of new companies; dismantling the large state enterprises into smaller independent units to foster competition (demonopolisation); allowing inefficient companies to close; selling most of the state industrial sector; and selling (or transferring) agricultural land to the private sector. The last two are what is generally known as privatisation (Mason 1992:91). It was extremely difficult to establish the value of the enterprises because of a lack of Western accounting practices as well as the false value of local currencies. Thus, the privatisation process 'was inextricably linked with the development of a convertible currency, the establishment of a banking system, and the creation of stock markets (Mason 1992:91). Keren argues that, without reorganisation, the process is 'very difficult, unprofitable and time-consuming, and may permanently damage those economies' since 'the existing enterprises are of little value, their

capital stock may be ill-adjusted to the task of generating profits and their capital value is highly uncertain' (Keren 1992: 239).

There were many other problems associated with this process. Not least of these was establishing who owned the enterprises - especially in the FSU, where state enterprises were previously owned and controlled from Moscow. Some Lithuanians might have hoped that some of the more inefficient and polluting enterprises would be the responsibility of Russia but eventually it was agreed that all enterprises within the republic belonged to Lithuania.[7] The national sentiment in the country was a force behind their decision. It was not seen as justifiable or desirable to have Russian owned factories in Lithuania. Following from this, some argued that the employees owned the enterprises and that the government should transfer ownership to the workers. Had some form of market socialism been the aim rather than a capitalist system such suggestions, which could have materialised in the form of workers councils as in Yugoslavia (see 5.4.5), may have had benefits for both productivity and employee morale.

The privatisation process was also characterised by widespread corruption which saw enterprises sold cheaply to Directors, bribery amongst local government officials and the judiciary, bidding by Lithuanian citizens on behalf of Russian businessmen and organised cartels, and theft of equipment. By 1994, around 2.5 billion litas (USD 625 million) of state assets had been illegally privatised (Samonis 1995:152-3).

Land ownership was also problematic since the farmers living on the land were often in conflict with pre-annexation owners and their descendents who were attempting to reclaim their property. This was more complicated in areas that had been designated National Park status. Brukas, the Secretary of the Ministry of Forestry, recalled that the privatisation of forests was a controversial issue in Lithuania and debate in Parliament slowed down the process. Examples of well managed state-owned forests such as in Canada were compared with less successful examples such as China, demonstrating that the political situation is important in establishing whether state or communal ownership of forests is more beneficial than private ownership for the environment (Brukas 1994). It has been estimated that 30-40 per cent

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[7] Disagreements continue over ownership of more lucrative enterprises such as an oil drilling platform off the coast close to the Kaliningrad/Lithuania sea border.

of Lithuania's forests could become privatised (Vaitkevicius 1994).

The process has been toward small ownership with an average area estimated to be about 6 hectares and leading to a possible increase to 100 000 individual owners. The Forestry Ministry is generally against the proliferation of owners but the notion of community ownership was rejected by parliament (Brukas 1994). It could be said that the use of organic methods of farming and small scale economic activity is more likely to be carried out on small properties. On the other hand, the concentration of animals stocked on a small area and the concentration of pesticides and fertilisers could increase causing problems for ground water (see also 3.4.4 and 7.4.1.4).

The current land reform legislation groups forests into four categories. The fourth category, 'economic use', makes up around 75 per cent of the afforested area while the first three: 'reserved forests' where no economic activity is allowed; 'specific use' has some parts wholly protected, allowing certain activities such as recreation and some felling of mature trees (but not clear felling); and 'reserved areas' aimed primarily at soil protection, make up around the remainder. When privatisation is completed, forests will be allocated to a certain category and the owner will be required to become familiar with what is permitted and be obliged to comply with those conditions. Accordingly, it would be possible for land currently under strict reservation (a National Park)[8] to be reclaimed by a former owner as long as the new owners understood that they must comply with any restrictions. Compensation is also a possibility and land tax exemptions would apply in protected areas (Brukas 1994).

Other incentives, disincentives, and effective policing of these regulations would be necessary if abuses by owners are to be avoided. Given the economic situation, there is likely to be a temptation to secure income from felling. In October 1995, the Forestry Ministry issued a warning to the 40 000 owners of afforested land due to the apparent devastation being caused by logging (ELTA, October 1, 1995). The 1997 revisions to the law on the restoration of property include the provision of compensation in the form of afforested land rather than agricultural land[9] and many claimants have begun to take this option

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8. This does not include Kursui Nerios Park on the coast which has been designated a special area and is thus exempted from private ownership given that there is no history of agricultural activity and there have not been any native owners.

9. This change is presumably to restrict the number of people working agricultural land,

and to harvest the timber. The Green Movement has begun a campaign for forest protection in Lithuania in protest of the amendments (Linas Vainius, pers. comm., March 1997).

The Landsbergis Government (March 1990 to October 1992) was much criticised for its privatisation policy. Many argued that it was implemented too quickly, particularly in the agricultural sector. Farmers struggled to make a profit under the new system, which appeared to be a crucial factor in the defeat of the Landsbergis Government at the elections of October 1992; the major swing toward the Democratic Labour Party came mainly from rural areas (see also 7.2.1.2). The Brazauskas Government has been similarly criticised for halting the privatisation process. Samonis (1995), for example, clearly believes that the approach of the LDDP Government has unnecessarily delayed Lithuania's transition from a planned to market economy.

It has been argued (Keren 1992) that the privatised state enterprises will in fact hinder growth in the private sector because their structures have been based on completely different premises. The aim of state enterprises was to meet production targets rather than to maximise profits. In addition, there is the problem of human resources. Managers and employees do not have market orientated skills and the 'Soviet style' of business will take a long time to disappear. The inefficiency of this approach is likely to continue under market conditions unless there is reorganisation of capital; both physical and human. Keren therefore suggests that there is a need for a new private sector instead of directing a lot of investment into old enterprises where it is essentially wasted. Building a new private sector should begin with the privatisation of small businesses and small areas of land rather than large state enterprises (Keren 1992: 239-46). Further, Peterson (1993:255) provides several examples of the way in which investment has often exacerbated environmental problems in the Soviet region. This has been primarily through funding the extraction of resources or production of goods for Western purposes using Western technology without employing pollution control features or ensuring maintenance of equipment as would be expected in the West.

Interestingly, investment from the West tends to be more accepted by Green activists (as is industry funding of their activities) in the former communist

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encouraging other forms of economic activity and avoiding conflict with the EU over agricultural policy.

bloc than among their counterparts in the West. The Green groups in the region have not had the same conflictual relationship with private industry (only with the state monopoly) that has been experienced in Western countries. Thus, Western investment is generally regarded as necessary for economic and environmental recovery (Fisher 1992:18) (see also 6.2).

Yet investment has failed to produce new capital. Much of what has been recorded as investment has simply maintained antiquated machinery. Cleaner, cost saving technology is slow to infiltrate the post-communist economies. This is not simply because funds have been sustaining old technology at the expense of the new. The tendency is for industries and other businesses to continue with old, obsolete practices or incorporate new installed capacity with the old. It is not clear whether the failure of new technologies to supplant obsolete ones is simple conservatism or a deliberate attempt to retain old facilities as a buffer (Keren 1992:241-3). Old habits are not easily transformed. The usual way of business, or life in general, can not be expected to undergo such a fundamental change quickly. The rules for a new focus of work need to be formulated and internalised. Learning new practices requires time and energy which participants might not be prepared to give (Keren 1992:247). Anecdotal evidence from Lithuania's early years of independence demonstrates Keren's point. Charity donations of modern equipment in hospitals and dental surgeries lay idle while medical practitioners preferred equipment and practices which were well known to them. Patients too seem to have preferred the safety of the old ways rather than trust the unknown. The 'Soviet style' service in restaurants and shops also shows how the change to a profit orientated approach will involve major adjustments in work place practices.

5.4.3.3 Industrial Pollution and the Economy

The Ministry of Environmental Protection points to the inclusion of Lithuania in the Soviet economy as the cause of the present fiscal problems. It recognises the limitations that the state of the economy places on the implementation of its policies and therefore sees foreign capital investment as crucial to economic reform (Environmental Protection Department 1992:29-34) (see also 6.2). Factories closed as a result of supply shortages, the glaring economic inefficiencies in their production, and the efforts of environmentalists. In 1992, industrial output fell by more than 50 per cent (Lieven 1993:330). As noted in Chapter 3, the decrease in production referred to above led to an

improvement in the environmental situation. Section 5.4.3.1 presents indications of an improving economy, with increases in GDP and declining inflation. Such improvements will necessarily involve increased pollution and measures should be taken to ensure the efforts in environmental protection over the last few years are not counteracted. As noted by Fisher (1992) some of these measures are not necessarily expensive but could go a long way to maintaining decreased pollution levels. Improved technology will be important as will effective monitoring and policing programmes (see 6.3.1.2), but none of these can be effective without financial and structural support from the Government which ultimately rests on *commitment*. Section 5.3.2 points to the inability of the market to provide such support on its own. Therefore, if Lithuania is to take advantage of the improved environmental situation and establish an environmentally sustainable society, such commitment from the Government will be necessary.

Issues such as waste water treatment require large capital costs and have, therefore, required foreign assistance (see also 3.4, 6.2, and 6.2.3.2). Thus, there does need to be an improvement in the economic situation in order to fund the enormous costs of implementing some environmental policies. However, some environmental protection cannot wait for such an improvement, particularly since increased economic activity typically causes more environmental degradation:

> Continued disregard of the environment will not only affect the quality of life of the population, but also ultimately reduce economic productivity and increase production costs. Thus, environmental improvements must proceed hand in hand with economic structural reforms (Helsinki Commission 1992, Ch. 4:3&6).

Whilst the LDDP economic policies have been criticised as 'detours' from the road to a market economy (Samonis 1996), they have essentially had a rational economics approach and an orientation toward EU membership which have had various implications for the environment. There has been essentially little difference in the political programmes of LDDP and the Sajudis camp and they both implemented conservative style economic policies whilst the "Right" have, at times, supported interventionism (see 7.2.1.1). The new conservative Government may redirect Lithuania back on to the road to a free market economy by taking a more liberal approach which should lead to improvement in traditional economic indicators. Yet as noted in 5.2-5.3, the typical implications of such policies are not only increased environmental degradation but also a widening gap between rich and poor.

It seems almost certain that the new Government will not be giving environmental protection any more consideration than the past government indeed it may in fact place less priority on the environmental sphere. The focus on EU membership could have some positive implications for environmental policy in Lithuania, however, in the main, EU policies are a hindrance to the establishment of an environmentally progressive society (see 7.3.1.3).

5.4.4 The European Union

The European Union (EU)[10] is an interesting example for discussing economic systems and the environment. While it is based on a market economy with an emphasis on free trade, it also encompasses principles of integration and co-operation which formed part of the philosophy of the Soviet Union. It is relevant here because Lithuania has been accepted as a member of the Council of Europe (a stepping stone to the EU) which will have political, economic, and environmental consequences for the country. Many environmentalists view membership to the European Union as a means of constraining the environmentally degrading activities of domestic industry (Fisher 1992:18). This support is not matched by Western European Greens, many of whom are uneasy about the supposed benefits of membership, including the impacts of increased transport (see 5.4.4.2). The Norwegian environmentalists, for example, were opposed to membership which was eventually granted following a referendum in 1994. Their opposition was based on the patterns of growth and free trade within the EU and the impacts these had on the management of natural resources, environmental standards and regulations, and democracy (Norwegian Society for the Conservation of Nature 1994:1) (see also 7.3.1.2).

The environment has had a role in EC policy since 1972 but it was not until 1987 that environmental policy was enacted by amendments to the Single European Act of the Treaty of Rome. This decision to give legal and political support for the concept of environmental protection in Europe was based on the understanding of the transboundary nature of pollution and followed a

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[10] The European Union was established by the Maastricht Treaty which was ratified in October 1993. The treaty introduced citizenship of the EU and aimed to increase inter-governmental co-operation in several areas. The EC continues to exist, having competence in matters relating to the Treaty of Rome (Europa World Book 1994:137). For the purposes of this thesis, EU and EC have been used synonymously since discussion essentially relates to the general concept of a united Europe and EC is used to cite publications written prior to 1993.

series of environmental accidents which proved this beyond a doubt[11] (EC 1990:5-7). Essentially an organisation designed to facilitate free trade, the EU must be able to demonstrate that environmental policy does not infringe economic activity. Therefore, conflict arises between economic and environmental priorities just as it does within the individual Member States. However, the Commission claims that a key principle of EU policy is that the strict standards developed are both environmentally and economically necessary thereby dispelling myths that environmental standards are an unnecessary burden on industry and emphasising that they can, and should, be part of economic growth and job creation (EC 1990:9). In practice, the concept of free trade often has precedence over environmental protection. However, countries like Lithuania with struggling economies might benefit by taking the EU standards on board, with or without inclusion in the organisation.

Expounded in the environmental policy of the EU are the notions that "economic expansion is not an end in itself" and "prevention is better than cure" (EC 1990:5&10). The transboundary nature of pollution demonstrates clearly how it is a matter of international concern and, therefore, that it must be guided from that level. Given these transboundary effects, the single market agenda of the EU could be affected by environmental concern, since the poor environmental record of one member affects both the environment and the economy of another. The EU acknowledges that a single market will only operate properly if the Member States, all with varying levels of Green concern, are able to agree and apply common standards of environmental protection. Therefore, there is a strong incentive (other than intrinsic concern for the environment) for the Community to take action. However, a recent report from the European Commission questions 'the ability of EC environmental Legislation adequately to protect the environment in the face of adverse trends in past and future consumption patterns' [sic] (Lang & Hines 1993:67).

The aim of the internal EU market is to create economic growth in addition to the growth already created in the Member States. Associated with this additional economic growth is a growth in nitrous oxide emissions (12-14 per cent), sulphur emissions (8-9 per cent) and carbon dioxide (15 per cent)

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[11] For example, in 1986, a fire at a chemical plant in Switzerland caused between 10-30 tonnes of chemicals, including mercury, to be released into the Rhine. Also in 1986, the nuclear accident at Chernobyl left a legacy of impacts in several countries.

by the year 2000 (Norwegian Society for the Conservation of Nature 1994:2). Another complication for serious action is the variation in measuring pollutants across Europe which gives the impression that levels rise and fall at national borders. The European Environment Agency (EEA), which formally came into being in 1993, has the task of standardising data that countries provide in varying terms or not at all. In light of the envisaged enlargement of the EU and the nature of transboundary pollution, the role of the Agency is intended to extend beyond the EU, co-operating with countries in the European Free Trade Area (EFTA) (Wright & Shorey 1994). Lithuania, Latvia, and Estonia signed free trade agreements on July 18, 1994, effective from January 1, 1995, bringing them into the EFTA (*Eesti Ringvaade* 1994).

5.4.4.1 Free Trade: Winners and Losers

Free trade has its roots in the writings of David Ricardo and Adam Smith and is based on the notion of 'comparative advantage' whereby all countries find their forté and fulfil that niche in the world market. Proponents of free trade argue that; the private sector is more efficient than the state, living standards rise in a free trade system (with the 'trickle down effect' alleviating resulting inequalities), it provides more choice to consumers, and it provides the most efficient use of resources, people, and capital (Lang and Hines 1993:20). But even with such a 'trickle down' effect, relative inequalities in wealth and power usually remain (Eckersley 1993:15). As discussed in 5.2.2 there has been criticism of free trade, in particular because of its effect on social equity and the environment. Eckersley argues that the disparity between rich and poor is likely to increase as we approach the physical limits to growth.

> Indeed, the long-term consequences of zealously pursuing the privatisation of environmental resources in an increasingly crowded world is likely to be the intensification of the already wide gap between the propertied and the propertyless, and the rich and the poor, both within and between nations (Eckersley 1993:15).

John Maynard Keynes, who originally saw free trade as almost being part of moral law, later argued that it was no longer obvious that a concentration of national effort to secure foreign trade was beneficial. Aside from the superblocs (EEA, NAFTA, and Japan) most countries have experienced adverse environmental, social, and economic effects as a result of the free trade system. Mahatma Gandhi realised this over fifty years ago: 'Free trade for India has proved her curse and held her in bondage' (Lang and Hines 1993:27-8).

The demand and supply mechanisms of the market cannot be used to manage finite natural resources; it is not only the poorer countries which have been impacted by the belief that they do. The EU has overfished most of the stocks in its oceans and continued to build the roads of free trade through untouched areas such as the Pyrenees in Austria. The notion of free trade in agriculture has also led to negative effects on economics, environment, and health within Member States (Norwegian Society for the Conservation of Nature 1994:6).

Articles 100 A and 130 R, S, and T of the Single European Act (the 1987 amendment to the Treaty of Rome) acknowledge 'the need to combine free trade objectives with a high level of environmental protection, as well as the desirability of pursuing environmental objectives as a legitimate end in itself' (EC 1990:20). So while the formation and maintenance of a common European market is the primary incentive for environmental policy, there is, theoretically, some measure of protection for the environment's sake. Article 130 R, paragraph 2, encompasses the EU's underlying philosophy:

> [a]ction by the Community relating to the environment shall be based on the principles that preventive action should be taken, that environmental damage should as a priority be rectified at source, and that the polluter shall pay. Environmental protection requirements shall be a component of the Community's other policies (EC 1990:20) (see also 7.3.1.2).

There are of course problems with putting such policies into practice. Some of these were discussed earlier - local economic situations and strong national sentiment - but there are other issues which must also be considered. That it is profitable to import fruit from the south into Europe while large quantities of Mediterranean fruit are dumped, indicates the problem of costing. This is largely due to lower wages, combined with the lower cost of energy, in developing countries (Lang and Hines 1993:61). The countries of Eastern Europe are in danger of entering a similar situation. While the countries of CEE and FSU have lower costs of production which might give some advantage for export, the amount of resources used is significantly higher which is detrimental to both the local environment and the economy. This, together with the lower wages and working conditions of the people, is a barrier difficult to transcend.

Developing countries are often trapped by their need for hard currency to pay for their increasing foreign debt and/or economic restructuring. This leads to over-exploitation of their own natural resources and energy in order

to capture export markets or the acceptance of toxic waste in exchange for cash. A Greenpeace study revealed that more than half of exported waste has ended up in developing countries or in CEE where regulations have, in the past, tended to be less strict (Lang and Hines 1993:63-4). In 1994, the Klaipeda branch of the Lithuanian Green Party alleged that the Government had been accepting hazardous waste from Germany for the previous four years (Lithuanian Green Party - Klaipeda Branch 1994:1-2).

The major restriction to implementing policies like those espoused in EU policy documents is the GATT. It might appear to aim for a balance between free trade and environmental degradation, however, in practice, the commitment to free trade is paramount.

> Present international trade rules and those of regional trading blocs encourage more environmental degradation by maximising trade. They hinder national, regional and international measures to protect the environment by calling them 'barriers to trade' (Lang and Hines 1993:64).

Countries that try to avoid the trap of over-exploiting their resources in the name of trade have had little success in protecting their own economies and environment because such measures are often seen as a 'barrier to trade' and, therefore, a contravention of the GATT. For example, in 1985, Indonesia banned the export (though not the felling) of raw logs and rattan from its rainforests. The EC argued that Indonesia was restricting supply in order to increase its manufacture of value-added products, such as furniture, which were previously made in Europe and Japan, thus contravening Article 1 of the GATT (Lang and Hines 1993:63).

Free trade not only increases pollution and restricts environmental progress by attacking national regulations as barriers to trade but makes it possible for countries with depleted resources to go elsewhere to find them, and facilitates the spread of disease through the movement of animals and plants (Norwegian Society of the Conservation of Nature 1994:3). However, free trade need not always have negative effects on the environment. Trade in cleaner technology, for example, particularly in environmentally progressive countries which have strong environmental legislation could have benefits for the global environment. The countries of the FSU are in need of more efficient technology which would significantly reduce resource-use and emissions. The renewable energy industries have also expanded to international markets. Such trade would be useful in Lithuania to establish the role of renewable energy, assisting self-sufficiency of supply following

the recommended decommissioning of the nuclear power station at Ignalina.

5.4.4.2 Transport

The transport issue, involved with free trade within the EU, reveals an interesting situation. Goods do not move freely; they are transported. It has been argued that the single market in Europe has allowed a situation where products are transported at various stages of their production to different countries where they are altered in some way[12], thereby increasing resource depletion, air pollution, acid rain deposits, and global warming from unnecessary oil-fuelled transport (Lang & Hines 1993:61-2). One European country can specialise in a product with all of Western Europe as a market. Such a situation is reminiscent of Soviet economic policy which rendered all republics reliant on one another in an attempt to prevent economic independence. While the former republics struggle to maintain this disintegration, Europe continues its aim of an ever-greater union, processes which consume most of the political energy of both the Former Soviet Union (FSU) and the EU (Kennedy 1993:256). While the harmonisation of laws in Europe is not, in itself, the same as a centralised administration, 'any increased propensity on the part of the central authority to insist on uniformity can be seen as an increase in central interventionism' (Auster 1988:276). That is not necessarily a problem, especially if the intervening body has set itself high environmental guidelines such as those set out by the EU. However, the issue of transport-generated air pollution must remain a significant concern.

In 1992, the Commissioner for Transport put forward proposals to expand the European transport network. European policy has shown a bias toward road transport (the key to trade links in Europe) since the end of WWII. The 1992 proposals paid little attention to the environmental impact of the new roads despite being required to include an environmental element under the Single European Act. Statements regarding the impacts were included in the Green Paper but omitted from the White Paper, demonstrating that

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12. For example, a potato might be grown in Belgium, peeled, chopped and packaged in Spain, and fried and eaten back in Northern Europe. Or a situation might arise such as in the UK where croissants are imported from Spain and sold in grocery stores whilst locally made croissants are available in bakeries on the same street. It begs the question - 'does it really make sense to transport identical goods around the world in the name of free trade?' (Lang & Hines 1993:61-2 and Norwegian Society for the Conservation of Nature 1994:3). The inefficiency and increased pollution affect of such a process is not dissimilar to that of the Soviet Union.

the Commission was aware of the conflict between its aim to increase transport infrastructure and its environmental commitment. Phrases such as "sustainable mobility", argues Bowers (1993) did not hide the fact that transport growth was connected to economic growth which was given priority over environmental issues (Bowers 1993:125-6). Given its commitment to the Union and the concept of free trade between members, such conflicts are not easily resolved and will be analysed on a case by case basis. Further challenges are likely as the objectives of free trade and environmental protection will often conflict.

5.4.4.3 Eco-Taxes

The EU has signed several international conventions relating to environmental protection, including the Vienna Convention for the Protection of the Ozone Layer in 1985, and a protocol in 1987 controlling the production of chlorofluorocarbons (CFCs). A total ban on production, import and use of CFCs was effective from the end of 1995. The community has also agreed to stabilise carbon dioxide (CO_2) emissions at 1990 levels by 2000 (2005 for UK). An energy tax was proposed to help limit CO_2 emissions but a failure to agree on the tax by the end of 1993 has made the year 2000 goal unlikely (Europa World Book 1994:152). The main argument against such a tax focuses on what is called 'environmental pricing'. In effect, it is argued that the tax, by including an environmental cost, was an impediment to free trade - in particular, its effect on competition with USA and Japan. The tax is supported by Belgium, the Netherlands, Denmark, France, Germany, and Italy, while less affluent members are concerned that a harmonised tax would affect their growth (Lang & Hines 1993:91&144). So, it can be seen that even a majority decision can be difficult to obtain. The various political and/or economic situations of the Member States can affect their decision which can have implications for the environment since the longer negotiations continue over such matters, the longer it will take to achieve goals.

Some Greens, too, are doubtful of the effectiveness of such taxes since they can become a "right to pollute" and companies with adequate resources might prefer to pay the tax than make necessary adjustments to reduce emissions. According to Ivan Gyulai (Hungarian Ecological Institute for Sustainable Development), such taxes can actually encourage more production and consumption and in turn conserve the source of pollution by creating an interest in maintaining its operations. There is also concern that the tax

is purely fiscal and the revenue is not all used for environmental protection measures (Gyulai 1994). In addition, governments in recession become reliant on the funds secured in this manner. The desire for hard currency for improving economic conditions in the countries of CEE and FSU (as noted in 5.4.4.1) mean it is easier to give the right to pollute in order to receive revenue than to take a more preventative approach. Permit charges and fines for exceeding allowable levels can provide finance for environmental projects but these too need to be backed up with government allocations (see 6.3-4).

5.4.5 Alternative Systems?

The search for an appropriate model to steer economic development in Lithuania began around 1990, although it appears that the governments in the region eventually had little choice in the form this would take. While it is clear that Lithuania, along with other post-communist countries, has embarked on a path of free market economics it is worth discussing possible alternative systems that are based on either a mix of socialist and capitalist principles or on another premise such as ecocentrism. In doing so, the environmentally and socially beneficial features of both are identified. Not all commentators would agree with such an approach or with the notion of governments actively seeking appropriate economic models. Indeed, it has been argued that

> [t]here is an important role for government, but it is not searching for some kind of new economic model that is somehow different from market economies and command economies. A necessary condition for economic improvement is the development of government institutions compatible with a market economy (Thomas Grennes pers. comm., February 9, 1996).

However, this thesis contends that, in light of the on-going economic and environmental problems on a global scale in general, and on a regional scale in particular, the scrutinising of such systems and the identification of their valuable facets is justified. As is the extraction of equally valuable principles from the socialist tradition in an effort to address the three Es.

The move toward decentralisation in the CEE/FSU region did not suddenly appear in the late 1980s or indeed with the initiatives of Gorbachev in 1984. The downfall of the Stalinist model had already begun. The systems put in place by Yugoslavia in the 1950s (following an internal revolution) and Hungary (following the Soviet invasion in 1956) indicate a type of "market

socialism", the possibility of which was debated among Western economists such as Dickinson (UK) and Lange (USA) in the 1920s and 1930s. These were more directly tied to the ideas of Lenin (rather than the Stalinist model) who introduced the New Economic Policy (NEP) in 1921. This policy was designed to improve the economy that was suffering due to a marked decrease in industrial output since 1913 as a result of civil wars and inappropriate socioeconomic policies. It is an example of how market forces can be used within the framework of socialism in order to promote economic development. The NEP introduced new "incentive arrangements" which improved individual and collective output. During the time of NEP (1921-28) the private sector accounted for 88 per cent of small factories while the state sector owned 90 per cent of the larger plants. The private sector controlled 58 per cent of the retail trade while the state controlled over 90 per cent of wholesale trade. The vision was to strengthen the material base of socialism and provide an opportunity for various forms of socialist ownership to develop, with the peasantry becoming more prosperous. This was superseded by the Stalinist model which incorporated the use of force, unrealistic targets, and a obsession with the plan itself. However, the lessons of combining enterprise and planning and private-public sector partnerships were not forgotten as the continued re-emergence of NEP in centrally planned economies testifies. However, the use of NEP has tended to be only for short periods (McFarlane 1991:27-8, 50-2, 61, 76).

A mixed market or market socialism formed the economic basis of Yugoslavia between 1950 and 1974 (the year of Tito's death). The system developed because of a number of reasons not least being the personal animosity between Tito and Stalin. The latter wanted complete subordination among the communist states outside the Soviet Union. Initially Stalin's greatest ally, Tito became the only man to successfully defy Stalin[13] (Mason 1992:22-3). The resulting standoff in 1948 led to a Soviet imposed trade and aid embargo on Yugoslavia (not unlike the methods to be used in the late 1980s to control and avenge rebellious republics such as Lithuania) which in turn created an economic crisis. While Tito and his colleagues found ideological support for their reforms (particularly in the ideas espoused by Marx in the Paris Commune and followed up by Lenin in *State and Revolution*), the new economic system was essentially a pragmatic response to the economic

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13. Stalin was later to try fourteen communist leaders throughout Eastern Europe as "Trotskyite-Zionist-Titoist-bourgeois-nationalist traitors" to quash any likely following of Tito's example. All were found guilty and eleven were hanged (Mason 1992:23).

situation (McFarlane 1991:51-2).

The essential feature of the economic system in Yugoslavia was a commitment to "social ownership" as a higher form than "state ownership" contrary to the views of the Soviet system. To this end, workers' councils were created as the trustees of social property. The councils were elected from the factory floor and managers were elected through an appointed committee in each industry. Later, these too were formed by the workers' councils. The councils were seen as a counter to increasing bureaucratisation, a resolution to the schism between manual and intellectual labour, and provided moral incentive for workers by nature of their direct involvement in the management of the firms (McFarlane 1991:51-52). Meanwhile, forty years later in the West, "managerialism" and bureaucratisation threatens to cause greater inefficiencies, through low morale and poor service quality (in the private sector and the more traditionally public sector alike) than the original cost-cutting measures which aimed to improve economic efficiency. Critics are again pointing to such structures as workers' councils to counteract the trends.

While participation in decision-making gave Yugoslav workers a greater sense of freedom (possibly a lesser sense of alienation), the liberalisation of travel greatly increased freedom by enabling citizens to work abroad (Ignatieff 1994:14). Another feature was the use of the market to allocate resources within the confines of five year plans. During 1957-67 the Yugoslav economy performed well but later slowed in the 1980s (McFarlane 1991:51-3).

> The early success of this experiment was a standing rebuke to the more authoritarian and centralized Soviet model, and it set a pattern of diversity that was to plague the Soviet leadership for the next forty years (Mason 1992:23).

Yet Tito cannot escape criticism for his own authoritarian activities which are said to have been at the root of the collapse of the entire state structure. It is argued that had Tito facilitated the emergence of a civic, rather than ethnic-based, party system, the fragmentation of Yugoslavia could have been avoided. A plural political culture would have allowed a non-ethnic basis for political affiliation to take hold (Ignatieff 1994:16). 'In the end, his regime was no different from the other communist autocracies of Eastern Europe' (Ignatieff 1994:16).

This demonstrates, once again, that the political context and in particular the nature of powerful and ambitious leaders, is a significant factor in the way an economic system operates. The ethnic diversity of Yugoslavia (a Federation of seven nationalities) is another facet which limited the success of market socialism. The problem of inequality within the Federation was difficult to resolve and had a major role in the war which began in 1991. The resentment of the richer republics, Slovenia and Croatia, that their economic success was "creamed off" to support Serbia was part of nationalists' convictions to become independent (Ignatieff 1994:18). The ongoing war in the region has led to horrific crimes against humans and nature. 'Unfortunately, then, we do not know how market socialism might have worked in the absence of these ethnic and federalist forces' (McFarlane 1991:54).

Other economic reasons contributed to the failure such as the complicated taxation system that was continually changed to account for problems as they arose, monopolistic competition, inflationary bias, and the growth of corruption (McFarlane 1991:53-4).

The West has played a significant part in the Yugoslav drama. The use of market measures itself could be seen as an attempt to please Western nations whose economic assistance Tito knew would be required (Plamenatz 1954:333). Western nations are again taking this approach in the CEE/FSU region (see also 5.4.2 and 6.2.4.5). In addition, argues Ignatieff, the West failed to construct a comprehensive territorial settlement following the end of the Cold War, adjudicating between rival claims and guaranteeing minority rights which would have helped avoid the new order of ethnic cleansing (Ignatieff 1994:40).

The features of the Yugoslav system most responsible for the breakdown of market socialism - ethnic heterogeneity and a lack of a pluralistic political system - are not found in Sweden. So what of the success of a mixed economy, known as 'functional socialism' by Swedish economists?

The socioeconomic system in Sweden is based on 'private ownership of major industries but large-scale government redistribution of national resources for social objectives' (McFarlane 1991:63). This system has yet another concept of ownership where there is a mix of private and state ownership with function and control being equally important. The underlying principles are a belief in the balance of power (including controls on corporations), a commitment to non-violent solutions to social conflict, and

a practical approach to state intervention in the economy for welfare purposes. Around 85 per cent of assets remain in the private sector but the right to profit from their use is controlled through a system of taxes and controls even to the point of locking up corporate resources in boom time to be released during recession (McFarlane 1991:64-5).

Of particular interest are the functions of the major players; business, government, and labour. A certain rapport has been built up whereby business recognise the benefits of the government controls. Welfare (health and maternity insurance, hospital care, workers' compensation, pensions, and allowances) is seen as a 'growth promoting social cost' rather than purely expenditure; that is recognising it as an investment. Thus, Sweden spends twice as much on welfare, as a proportion of GDP, than Australia. Despite this, Sweden rarely has over five per cent unemployed and prior to 1971 enjoyed near full employment (McFarlane 1991:66-7).

Besides the cultural homogeneity, Sweden has also built up political cohesion with a long period of Social Democratic government which has certainly been a crucial factor in the working of functional socialism. The economy did begin to slow down in the 1970s and sources for welfare became less generous so payroll and income taxes were increased leading to a backlash and election loss for the Social Democrats. The warning was heeded and, when restored to office, the government recognised the financial limit society had placed on the welfare state (McFarlane 1991:68).

The well established democratic political culture facilitating public comment on policy, a homogenous ethnic make-up, and the economic status to improve technology have allowed some reprieve for nature in Sweden. However, environmental problems still exist. Some are a result of transboundary influences from the South while others are a result of economic development as elsewhere in the Western world. The continued promotion of nuclear power is also a major concern for environmentalists. This is of particular importance since the Swedish Nuclear Inspectorate (SKI) is heavily involved in decisions regarding the future of nuclear power in Lithuania (see Chapter 2). The more recent decision of the Swedish Government to end nuclear power in their country, to be replaced primarily by the use of biomass, is a promising sign for the region.

Lithuanian society is also relatively ethnically homogenous (80 per cent Lithuanian) so should avoid the kind of violence that emerged in Yugoslavia. Chapter 7 discusses the importance of now building up a democratic system and a civic society will be crucial for effective environmental protection. That is not to say that supplanting a model of market socialism would be more beneficial than model capitalism (see 5.4.2), yet some of the equity related measures in the workplace and an integration of market forces and government intervention in redistribution of resources are strengths that ought not be ignored. The tendency has been, however, to reject all socialist fundamentals and resist government intervention in social and economic life (although some would argue that Brazauskas has not rejected all of these principles). The transition period referred to in Lithuania and other countries of FSU and CEE has created many economic difficulties not least of which has been the high inflation leading to unaffordable prices (see 5.4.3.1). McFarlane has noted that market socialism is helpful in overcoming the problem of split-level pricing[14]; a common feature of economies stuck between central-planning and market economies. He argues that full market socialism avoids the unstable situation by not giving automatic priority to heavy industry (McFarlane 1991:61).

Lithuania with its desire for inclusion in the European Union is more likely to follow the line of Sweden. Its form of socialism - or welfare state economics - would be considered far more acceptable especially given the high standard of living the Swedish people enjoy. The Swedish model has economic success to recommend it and FSU and CEE governments could gain insight from the system that uses a market mechanism to increase standard of living while maintaining some government assistance in the name of social justice. However, its unique historical evolution and cultural development make it difficult to copy in other countries (McFarlane 1991:64). Also, Lithuania does not have the same degree of indigenous natural resources to form a secure economic base.

While it could be argued that both market socialism and functional socialism address the first two 'Es'[15] : there must be other factors at play for an

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14. This refers to the situation where the prices of some consumer goods are determined by the market whereas others, for 'social' reasons, are kept down by subsidies and controls (McFarlane 1991:61). It is referred to as 'price rationalization' by Mason as a step by step approach to economic reform as opposed to the "shock therapy" used in Poland (Mason 1992:87,89).

15. However it must be noted that the former has, in general, been implemented by an

environmental benefit to be observed. In particular, a well established democracy and political culture which enables the concerns of citizens to be accounted for in decision-making and a commitment to addressing environmental issues from those in power. Also, well developed administrative structures which facilitate effective implementation (Fisher 1992:10). For these reasons, along with ethnic homogeneity, thorough education, and considerable natural wealth, Sweden can be recognised as more successful (if long term maintenance of the underlying principles are a measure of success) both in terms of social equity and environmental protection (although environmental progress may be limited by EU membership - see 7.3.1.2). So, the failure of the system in Yugoslavia is not necessarily an indictment of market socialism *per se*.

According to a UNICEF report, the 'socialist market economy' that has developed in China was a deliberate mixing of socialist ideals with decentralisation and market incentives. The state retains a strong participation in the industrial sector and in the overall direction of the economy. The social benefits have been noted with poverty declining from 28 to 9 per cent between 1978 and 1990 (although tending to rise again in the mid 1990s) and indicators of human welfare showing improvements while regional imbalances in income remain. In contrast, the CEE/Baltic region 'experienced widespread deterioration in economic performance, living standards, poverty, mortality rates and child welfare' (UNICEF 1995: 55). There are a few explanations for this difference. Firstly, the changes in China were implemented at a much slower pace than experienced in the post-communist region of Europe. In addition, external factors such as the dismantling of the CMEA aggravated the economic situation in the CEE and the Baltics. It has also been argued (Cornia 1994 cited in UNICEF 1995) that the disintegration of the political system in Eastern Europe rendered a slower transition impossible (UNICEF 1995:56). While the improvements in human welfare indicators along with economic growth are laudable it is, however, hard to justify the human rights situation in terms of such marginal economic success. The tendency is, however, to therefore measure the economy successful (see also 5.3). In terms of environmental problems, market socialism (as it has been used in practice) is still somewhat inadequate. The high consumption rates in Sweden are also of concern in relation to global environmental issues. Other combinations of market and socialist ideals have claimed to

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authoritarian regime leaving benefits counteracted in other areas of social life.

have environmental protection at their core. Would these provide a more environmentally sensitive economic path for Lithuania?

Some socialists, recognising the dilemma for left thinking following the demise of the communist bloc (although few lament the downfall of the totalitarian style), fear that 'the traditional socialist aspiration for an equitable society may be lost in an unplanned dash for growth and an obscene scramble by Western interests for morsels from the corpse of communism' (Dunkley 1992:1). These aspirations form a part of the Green vision combining social justice, environmental protection, and ecologically sustainable development. Thus, many socialists, understanding the need to address the environmental concerns of society have attempted to liken themselves to the Greens. Devereux, for example, asserts that environmentalists are the new 'socialist radicals' and that there is essentially no difference in the objectives of Greens and socialists. Meanwhile, capitalists have sought to create a rift between workers and environmentalists (Devereux 1992:99). While the two groups may essentially agree on issues of equity and income redistribution, there is a significant difference in their approach to the environment.

The new breed of eco-socialists have taken on board an environmental focus recognising the limitations of orthodox Marxism in developing an appropriate environmental ethic. They attempt to address the historical legacies of socialism such as bureaucratisation, the unlikelihood of the proletariat being the major proponents of change, and the growth orientation applied to poverty issues which have a techno-centric focus in aiming for a better mastery over nature (Eckersley 1992:119). Ecosocialists blame the competitive and expansionist nature of capitalism as ultimately responsible for the ecological crisis but recognise that centrally planned economies share a belief in the infinite capacity of the earth (or at least that technology will develop ways to extract more (or new) resources). Their vision is for a non market allocation of resources yet this should involve democratic planning. To this end, they argue for widespread public participation, public accountability, and political pluralism.

For the ecosocialists, community empowerment should be facilitated by the state (contra ecoanarchists) to ensure redistribution between classes. The significance of the state is expressed by Frankel; 'democracy would not survive the abolition of state institutions' (Eckersley 1992: 123, 134, 136). This mix of market and state controls is not to be confused with market socialism which

Frankel has criticised 'on the grounds that ecological and social justice objectives would be continually compromised by national and international market forces' (Eckersley 1992:136). It is interesting to note here that Yugoslavia was far from an 'open economy' and was not subject to international market forces. However, this in fact contributed to its failure as monopolies tended to develop within the country.

The challenge for ecosocialism is to avoid the problems of bribery and corruption, dictatorship, economic inefficiencies, intolerance and suppression of political dissent, and environmental devastation that is characteristic of command economies (Eckersley 1992:136). Ecosocialism acknowledges the limits to growth (as, arguably could authoritarian or fascist regimes), however, it is more limited than the environmental ethic espoused by ecocentrism. Its concern for human autonomy and its criticism of capitalism's affect on both humans and nature is an important step forward for the socialist tradition. However, the domination and protection of nature is seen purely in terms of the affect on the human world. From the ecosocialist perspective, it is morally wrong to dominate nature because it gives rise to the domination of humans thus, protection only occurs if it in turn facilitates some measure of human emancipation (Eckersley 1992:128-9).

Green economists, working on an ecocentric premise, are critical of both corporate capitalism and a highly centralised state. They do, however, ultimately favour the market over highly centralised and bureaucratised economies. Daly and Cobb, for example, argue:

> If one favours independence, participation, decentralized decision making, and small - or human-scale enterprises, then one has to accept the category of profit as a legitimate and necessary source of income. There is plenty of room to complain about monopoly profits but that is a complaint against monopoly, not against profits per se....If one dislikes centralized bureaucratic decision making then one must accept the market and the profit motive, if not as a positive good then as the lesser of two evils.... We have no hesitation in opting for the market as the basic institution of resource allocation (in Eckersley 1992:141).

The emphasis is on scale; that the material-energy throughput of all economic activity (state and private) should be reduced and be made more responsive to the environment (Eckersley 1992:140-1). While Green economists acknowledge the value of the price mechanism they do not accept 'the existing pattern of ownership, control, and wealth distribution nor the scale and reach of market penetration in everyday life' (Eckersley 1992:141-2). In

determining the scale of economies, consideration must be given to the needs of present and future generations of the human and nonhuman world (Eckersley 1992:142). The focus too has been on ethical investment, small business, community level decision-making, worker participation in management, as well as market incentives for reduced consumption and environmental protection (Eckersley 1992:143). It will be extremely difficult for a single nation to pursue such a programme while the rest of the increasingly interdependent world continues to put growth ahead of environmental protection (Eckersley 1992:144). So what relevance has this for nations like Lithuania who have been actively searching for an appropriate economic system following the reinstatement of independence?

At the time of independence, commentators were suggesting that post-communist societies might lead the world in developing an environmentally sustainable economy. The success of the Green movements in shutting down polluting enterprises indicated a high priority for environmental rehabilitation in the FSU and CEE. Politicians and activists within the region were also acutely aware of the environmental destruction in their countries and advocated an integrated approach to the problems of economy and environment. Such sentiments are expressed in the statements below:

> The activities of all government bodies will be planned so as to assure continued economic use of the natural environment, whilst actively protecting it in order to raise the quality of life of the entire nation and, in turn, help the Polish economy' (Bronislaw Kaminski Polish Minister for Environmental Protection 1990, in Manser 1993:14).

> [The] government wishes to develop the economy and the environment together in a sustainable way with the reservation that in the case of a conflict between these two areas, it will place short range economic interests after those of ecological stability (Sandor Kerestes, Hungarian Minister for Environment and Regional Policy 1990, in Manser 1993:14).

Given its historical connection to nature, Lithuania was also seen as a possible model for an environmentally friendly society, avoiding the inefficiencies of communism as well as the excesses of the West (for example, Banks 1991:82). Even in 1995, Kritkausky, still attested to the possibility of remarrying economics and ecology thus avoiding the environmental devastation of both systems and claimed that 'Lithuania is fertile ground for such an experiment' (Kritkausky 1995:139). This is, to some extent, supported by the National Environment Strategy of Lithuania, the objective of which is 'to ensure that the concept of environmentally sustainable development underpins Lithuania's transition to a free market economy' (Ministry of

Environmental Protection 1995b:1-3). However, it would appear that it is probably too late for such an experiment. As discussed in Chapter 4, such optimism has been quashed by the economic recession that accompanied independence, the fall of environmental issues from the pinnacle of the political agenda, and the dissolution of the Green movement. Additional reasons are presented in Chapters 6 and 7.

As noted by Eckersley above, there would be difficulties for Greens in convincing voters to pursue such a system while the rest of the world watches. Likewise the countries of FSU and CEE were hard pressed to choose a mixed economy (particularly one with an ecological focus) for a number of reasons. The economic realities of everyday life were certainly instrumental in the demise of environmental activism in Lithuania supporting, to a point, the notion that the environmental movement is a luxury of the wealthier class or more accurately, the wealthier nations. Alternatively, as discussed in Chapter 4, the concern over environmental problems may have had more to do with securing political independence than a commitment to the rights of the non-human world.

There are national and international factors involved in the inability to integrate environmental considerations into economic policy as originally claimed at the time of secession. Nationally, the political and administrative structures have been an obstacle, together with the fragility of governments and the aforementioned economic crisis (Fisher 1992:8). Internationally, the desire to be accepted by the Western world and receive some of the pie that had been denied them for fifty years is linked to the domestic environmental situation. The lure of the European Union (see 5.4.4 and 7.3.1), particularly in terms of the standard and quality of life experienced in Member States, has also played a crucial role in the decisions made by Lithuania and others from FSU and CEE. Interestingly, the EU also offers some legitimacy to environmental issues and sets relatively high standards for new members (see 5.4.4). The nature of the world economy; increasing interdependence through free trade, the influence of transnational corporations, and pressure from the big money lenders to pursue certain reforms in return for financial assistance has made it impossible for such countries to follow through with innovative, and pro-active forms of economic management and government (see Chapter 6).

5.5 Conclusion

It has been established that a mutually influencing relationship exists between economy and environment. Although based on fundamentally different philosophies, from liberalism to Marxism, all economic systems have negative consequences for the environment. In terms of creating an environmentally sustainable society in Lithuania, or any other country for that matter, economic decisions must take their environmental and social impacts into consideration.

The free market system has had serious implications for the environment around the world due primarily to its failure to adequately "cost" environmental damage. The notion of free trade promulgated by the capitalist system has not only led to increased use of finite resources and increased levels of pollution associated with energy use but also to the growing disparity between rich and poor.

Whilst reform of the inefficient and environmentally destructive practices of the past is clearly important for Lithuania's cultural and natural heritage, it is less clear that rational economic models from the West are adequate either economically or in terms of environmental rehabilitation and protection. The experience of CEE suggests many problems associated with supplanting such models. Lithuania's path to a market economy, then, cannot be seen as a panacea for the Soviet environmental legacy.

The economic recession that followed the restoration of independence has contributed to the decline in Green support and in the priority given to environmental issues in general. Thus, the changes made so far indicate a priority for economic concerns, essentially at the expense of "soft" issues such as the environment and thereby explaining, to some extent, why environmental problems remain. But, as Chapter 4 argued and as Chapter 7 further demonstrates, there is a myriad of other reasons why Lithuania has not embarked on the road to an environmentally sustainable society. The international community, for example, has influenced the chosen path both directly and indirectly. The attraction of joining the EU predominates decision-making, while free trade agreements limit any progress toward an environmentally sustainable society. As Chapter 6 demonstrates, international donors and money lenders have also influenced the process by providing assistance conditional on economic reform. There are also problems

associated with political and legal reform which have hindered a more environmentally sound direction (see Chapter 7).

Lithuania has not made any clear progress toward the creation of an environmentally sustainable society as someexpected. Given that Lithuania has "chosen" a free market economic system, it could be possible for the market to be used, if not to create an environmentally sustainable society, then at least to maintain the environmental improvements so far which have, primarily, resulted from economic decline. The financing of environmental protection could provide some evidence of a commitment on the part of the Lithuanian Government to resolving environmental problems. Therefore, an analysis of the methods used to finance environmental rehabilitation and protection is presented in Chapter 6.

Chapter 6: Financing Environmental Rehabilitation and Protection

6.1 Introduction

This chapter is composed of two parts. The first evaluates the role of international assistance in funding environmental recovery and the second discusses the system of generating domestic input. The international assistance section is an updated and modified version of conference papers presented in Adelaide, Australia in 1995 and Vilnius, Lithuania in 1996 (see Banks 1996 and Banks 1997). The direction of both domestic budget allocations and international assistance toward environmental projects is demonstrative of commitment to environmental protection. An analysis of such funding could, therefore, indicate whether Lithuania has given priority to environmental issues in funding decisions, an important aspect of environmentally progressive society.

The funding required for environmental recovery in CEE and FSU is enormous. Early on, few estimates were offered, mainly because it was not clear what needed to be done. One guesstimate of USD 600 billion over a twenty year period was mentioned for CEE countries alone (Manser 1993:86). The Helsinki Commission (1993b, Ch.5:32) estimated that an investment of at least 512 million ecus (USD 680 million) would be required to curb the effects of Lithuania's hot spots.

Given the difficult economic situation that Lithuania faced following the restoration of independence, the possibility of generating the required funds for environmental rehabilitation and protection from domestic sources seemed unlikely. As the severity of environmental destruction in the former communist bloc became known, it also became clear that international assistance would be needed in order to rehabilitate and protect the environment. Such assistance has been minuscule in comparison with economic aid. However, international environment assistance can lend legitimacy to environmental issues in the post-communist world, and it can help to keep those issues on the political agenda (Fisher 1992:1).

According to Manser (1993:88), most of the environmental investment in the CEE region has so far has come from the local economies rather than

from international assistance. During 1990-92, for example, 85 to 90 per cent of total environmental expenditure in CEE was domestically generated. The contribution from the international community to the CEE region has been less than 1 billion per year; a twentieth of what is required (Manser 1993:88).

It was difficult to ascertain whether a similar pattern could be found in Lithuania due to discrepancies in figures. If the domestic allocations to the environmental sector for 1992-1995 are added together with the total environmental assistance, as recorded in the Ministry of Foreign Affairs database for the same period (MFA 1995), it seems that a total of USD 127.89 million was provided for environmental projects during 1992-5 (MFA 1995)[1]. Around 85 per cent of this (including income from environmental taxes and pollution fines) was domestically generated. However, the database does not appear to include all of the larger contributions for waste water treatment[2]. Information taken from the MEP annual report indicates that 'aid and other international assistance' amounts to 385 million Litas (USD 96.25 million) for 1994 and 1995 alone[3] (Edmundas Greimas and Arvydas Dragunas pers. comm.). However, this figure includes loans provided for waste water treatment which have not been included as assistance in this thesis. While an accurate figure could not be established, it seems that a significant proportion is generated domestically. All other calculations referring to proportions of assistance provided are derived from the MFA database.

The national budget of Lithuania is still comparatively small (around USD 1.3 billion), meaning that the amount spent on the environment is small compared with Western countries. The amount provided for environmental purposes could be increased at both the international and state level. A relatively small shift in the direction of the aid and state funding could significantly increase the actual amount spent on the environment given that it now represents only a small percentage of the total. There is also a

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1. These figure exclude funding of energy and nuclear safety which comes under the direction of the Energy Ministry rather than the Ministry of Environmental Protection.

2. The sum total of projects relating to waste water treatment (including training and seminars) amounts to USD 4.13 million (MFA 1995) whilst it is stated elsewhere that international assistance for treatment plants in Kaunas and Klaipeda amount to at least USD 7 million and USD 9 million respectively (World Bank 1994:14-15, MEP 1994, and EBRD 1996:32).

3. Based on these figures for 1994 and 1995, the proportions of domestic and international assistance in that period would be 33 per cent and 67 per cent respectively.

small amount of funding derived from pollution charges, fines and taxes (see 6.3.1).

6.2 International Assistance for Environmental Rehabilitation

International environmental assistance comes in the form of technical or capital grants. Firstly, it is necessary to define what is meant by environmental assistance, or aid. The main distinctions relevant here are between economic, social, and environmental assistance. These types of aid are identified by their intended aims. For the purposes of this thesis, 'economic aid' relates to all assistance that aims to reconstruct or develop the economy (including agriculture, industry development, financial reconstruction). 'Social aid' refers to assistance directed toward areas such as health, welfare, education, and transport. 'Environmental aid' is aimed at environmental rehabilitation, pollution control, or nature protection.

There is significant overlap between the desired aims of these types of assistance. Environmental assistance, such as the construction of a sewage treatment plant, stimulates the economy as much as any other development (at least initially). It also has implications for health. Measures which improve environmental efficiency often have economic benefits. Assistance directed toward the agricultural sector can have both economic and environmental benefits. However, it must be noted that some projects in the agricultural sphere may have detrimental effects on the environment in that they can involve subsidising the purchase of chemicals (fertilisers and pesticides) which may be used inappropriately. Funding for ecologically based projects such as using manure as fertiliser or to generate energy is desirable. The economic situation has tended to reduce chemical usage as they have become too expensive for farmers. This, in turn, has reduced the biological load on the rivers. However, subsidising the purchase of pesticides and fertilisers can have the opposite effect. In this thesis, assistance provided for problems relating to energy and nuclear safety have been separated from that directed at environmental, economic, and health sectors, although it is clearly an issue for all three.

During the 1991-1995 period, Lithuania received approximately USD 881.5 million in assistance. Environmental assistance amounted to around 2 per cent of that total (18.4 million) while economic assistance totalled USD 324.7 million (37 per cent) (MFA 1995)[4]. Assistance provided for environmental

purposes comes in a variety of forms. Technical assistance grants involve the transfer of technology while capital assistance grants involve financial transfers, with expertise being associated with both. Assistance can be multilateral (provided by international organisations such as the World Bank, EBRD, or UN) or bilateral (provided by a single donor country). Assistance to Lithuania has been generally technically based. Loans have also been negotiated for environmental purposes such as energy efficiency measures. For example, EBRD agreed to lend Lithuania USD 50 million for building fuel storage units, designed to increase the efficiency of boiler houses, and for purchasing equipment such as gas and water meters. This aimed to economise on fuel use and reduce heat losses in power stations and amongst domestic consumers (*The Baltic Independent*, 3(138); 5, November 1992).

Five major priority sectors for environmental assistance have been identified in Lithuania. These are both pollution control and prevention orientated. Sewage treatment plants, solid waste management, and air pollution monitoring have a focus on control while energy and nature conservation emphasise prevention (Hägerhäll and Hägerhäll Aniansson 1995:25). Other assistance has been provided for improvements at Ignalina nuclear power plant, the inventory and clean-up of former military sites, environmental education and literature, policy and legislation development, and organisational support for environmental NGOs (Danish EPA 1994:3, MEP 1994:3, MFA 1994:26-8). Lithuania is likely to be reliant on such assistance for these larger projects in the medium to long term.

6.2.1 Who Provides Environmental Assistance?

6.2.1.1 Bilateral Donors

Table 6.1 provides a selection of assistance provided to Lithuania and the proportions of these contributions directed at environmental issues. Denmark is one of the main contributors of environmental assistance to Lithuania. During the period 1991-1995, USD 44 million was provided by Denmark with 22 per cent for environmental projects. This accounts for more than half (53 per cent) of the total received by Lithuania for environment purposes (MFA 1995)[5]. A further 24 per cent of the Danish contribution was directed

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[4] These figures refer to all assistance, including projects that had not been approved at the time but were 'planned' or had a 'firm commitment'. The amount received (completed, underway, or approved) during 1992-1995 was USD 493 million (around 59 per cent).

at energy and nuclear safety. Denmark also has a good record in Eastern Europe, particularly by supporting renewable energy and cleaner technology which would go some way toward promoting self-sufficiency in the recipient countries (Manser 1993:91).

Sweden has also orientated its assistance toward environmental projects. A total of USD 36 million in assistance was provided by Sweden in 1991-1995, of which around 10 per cent was for environment related purposes. This accounted for around 20 per cent of the total environmental assistance provided to Lithuania. In addition, 18 per cent of Swedish assistance was

Table 6.1 Bilateral Assistance to Lithuania: 1991-1995

Donor Country	Total Aid USD (millions)	Energy/Nuclear %	Environmental Aid %	Proportion of Total Environmental Aid %
EU	138.0	11.4	1.5	11.2
Japan	44.2	99.0	0	0
Denmark	43.9	24.0	22.0	53.1
Sweden	35.9	18.6	9.8	19.1
Italy	32.0	0	0	0
Germany	23.1	0.7	0.4	0.5
USA	17.0	20.8	8.6	8.0
UK	8.2	35.5	0	0
Switzerland	6.6	0	0	0
Norway	6.4	11.5	9.9	3.6
Netherlands	6.4	0	1.4	0.5
France	1.8	6.9	11.8	1.2
Finland	0.7	0	34.5	1.4

Adapted from: Ministry of Foreign Affairs of the Republic of Lithuania (Aid Coordination Secretariat) 1995; 'Project Database - Summary Report' (5th ed.), Vilnius)

5. A discrepancy between the MFA (1994) database and the Danish EPA database was noted by Banks (1996 and 1997) where the former source was used to maintain consistency. Information exchanged at meetings between MFA staff and coordinators of Danish Environmental aid in Lithuania has been included in the 1995 database (MEP, pers. comm., August 1996). Both total aid and environmental assistance provided by Denmark appeared to have more than doubled between 1994-1995, yet most of this was due to the updating rather than a sharp increase in provision. This is substantiated by the fact that all projects are listed as starting in 1994 or earlier in the 1995 edition of the database (MFA 1995). As a result of the updated information the reported proportion of total environmental assistance provided by Denmark increased from 35 per cent to 53 per cent.

spent on energy and nuclear safety. The EU has contributed a significant amount of assistance to Lithuania (USD 138.02 million) but only 1.5 per cent has been allocated for environmental purposes (MFA 1995). Given that this amounts to a reasonable proportion of Lithuania's total environmental aid (11.2 per cent), a small change in the direction of this assistance could significantly increase the actual amount received for environmental projects. Norway's assistance has been more evenly spread with aid being provided for energy and nuclear safety (11.5 per cent), environment (10 per cent), agriculture (10 per cent), education (10 per cent), and health (8 per cent). Given that many of the projects in agriculture and nuclear safety (and indeed some industry related projects) have positive benefits for the environment, it can be seen that assistance from Norway has an environmental direction. Assistance from Germany, on the other hand, has tended to be directed toward the social sphere. Germany's contribution to environmental assistance is significantly less than the other donor countries in the region with energy and nuclear safety receiving 0.7 per cent and 0.4 per cent provided for other environmental purposes. The Netherlands directed assistance primarily toward health (45 per cent). At the end of 1994, no assistance had been given by the Netherlands for environment or energy and nuclear safety, however, a total of six environmental projects had been proposed (MFA 1994). Three of these projects were underway or completed by September 1995, while the remaining three were still under consideration. They accounted for a mere 1.35 per cent of the Netherlands total contribution and 0.5 per cent of total environmental assistance (MFA 1995).

6.2.1.2 Multilateral Donors

Lithuania has also received aid and loans through such multi-lateral donors as the International Bank for Reconstruction and Development, the European Bank for Reconstruction and Development, the World Bank, the International Monetary Fund, and the United Nations. The IBRD and the EBRD have contributed the most funds with a total of USD 312.5 million provided to Lithuania. Nuclear safety has clearly been a priority for EBRD with approximately 22 per cent directed toward energy and nuclear safety (MFA 1995). The majority of this allocation funded the preparation of *Emergency Planning for Lithuania* (Lahmeyer International and LEI 1996). However, the environment does not appear to be on their priority list. Only 0.11 per cent of EBRD funding was earmarked for environmental projects between 1991 and 1995 (MFA 1995). The IBRD has clearly had an economic focus

with USD 120 million (54 per cent) provided for economic and industrial reconstruction. Approximately 19 per cent of IBRD funding was directed toward energy and nuclear safety while no assistance was provided for environmental purposes (MFA 1995).

While such organisations do not have the same political pressures involved in donating as discussed below, they also act primarily out of self interest. The majority of financial transfers from these institutions has been in the form of commercial loans (albeit sometimes subsidised) rather than aid as such. The dilemma has been that while the international financial institutions can borrow more cheaply than individual countries, they still must operate under normal banking practices, thus requiring a reasonably high security for the loans. In addition, many CEE countries are reluctant to borrow from the West unless there is some guaranteed income in Western currency as a result. Hansen (1995:21) points out that the policies of such institutions are reflections of the governments and, therefore, the solutions rest with them. He suggests that capital be made available for environmental improvements 'in the common interest of East and West under conditions more favourable than normal market terms' by merging donor assistance with either commercial loans or profit from the World Bank's activities to reduce the burden of interest. The PHARE and TACIS programmes allocate EU funding some of which is directed toward the environment. This thesis focuses on bilateral donors.

6.2.2 Why Provide Environmental Assistance?

There are a number of reasons why governments have provided environmental assistance to Lithuania and other post-communist-countries in the region. These range from altruism, responsibility, efficiency, and the development of markets for various environmental technology. The Danish perspective points to global responsibility for protecting and managing the environment as well as the clear self interest in preventing transboundary pollution (Hansen 1995:20). Assistance is administered through the Danish Environmental Support Fund for Central and Eastern Europe (ESF). The focus is on Cleaner Technology, Institutional Strengthening, Hazardous Waste, and Nature Protection, with collaboration on Energy projects with the Danish Energy Agency and the Ministry of Housing (Danish EPA 1996a:1-2).

In Sweden, the question of whether to provide environmental assistance

was first debated in 1989, following an EPA study which focused on the country's role in international environmental cooperation. The study recommended care be taken to identify and prioritise problems before committing aid. It also warned that Sweden could become directly responsible in the future for the environmental measures it funds (Löfstedt 1995:43) (see also 6.2.2.2).

Along with fears of transboundary influences, the 'neighbour interest' is another factor in determining the provision of environmental assistance. It is a notion referring to the physical proximity of the recipient countries where social, economic, and environmental problems are more visible than similar problems in the Developing World (Löfstedt 1995:41). Fisher notes that some have argued that western interest in the environmental situation in the region could be regarded as 'eco-imperialism'. But he contends that the international interest in CEE

> is matched by an equally intense interest on the part of these countries to re-enter the international community. Thus, international interest has a very significant impact on domestic policy (Fisher 1992:3)

In addition to the physical closeness of countries like Lithuania to European donors, the opinion of policy-makers tends to be that these countries are more similar economically and culturally. The economic and environmental problems are viewed as transitory and it is assumed that CEE societies will, in the medium term, be similar to those in the West, while the problems in the Third World are seen to be longer term (Löfstedt 1995:42). Environmental assistance has been based on two other important reasons: efficiency and responsibility.

6.2.2.1 Efficiency

The efficiency argument stresses that more can be gained by improving environmental conditions in the FSU and CEE than investing the same amount in the donor countries, where advanced technology already exists. It was on this basis that a report from the Swedish Energy Administration indicated that environmental assistance should be provided to CEE. It argued that more environmental improvements would be gained in both the donor and recipient countries (Löfstedt 1995:44). French (1990:9) also noted the cost-effectiveness of investing in pollution control in the former communist region as a way of 'cleaning up at home'.

The argument is particularly pertinent in Sweden's case since around 90 percent of damage from acid rain in the south is caused by emissions primarily from Eastern Europe. Therefore, in order to improve the situation in Sweden, it is necessary to assist the economically disadvantaged post-communist countries to reduce pollution at the source (Löfstedt 1995:44). It has also been an important argument in the cleanup of the Baltic Sea where the wealthier nations in the catchment have provided assistance to the poorer (and more polluting) nations to fund sewage treatment plants and effluent reduction facilities for cities and industries located on the rivers leading to the Sea (see Chapter 3). The investment in Baltic sewage treatment helps Sweden cleanup its own beaches (Peterson 1993:254); an investment which would be more costly if made in Sweden since pollution from the external source would continue to counteract the domestic measures. The Dutch Electricity Generating Board used the efficiency argument to support installation of desulphurisation scrubbers in Poland pointing out that it was more cost effective for Europe's environment (Manser 1993:76).

There have been criticisms that the assistance based on the efficiency principle is not always efficient in practice. For example, installing scrubbers on obsolete factories might be considered to be an inefficient use of resources since such plants could face closure in the short term. In addition, it is argued, the economic decline in the region has led to a 'natural' decrease in emissions (through a decrease in production and, therefore, energy consumption); a reduction which did not cost anything. For example, in 1992 the decrease in energy consumption in Estonia (where almost all of SO_2 emissions are a result of power generation) led to a 6 per cent reduction in emissions. This is compared to an investment of 24 million Finnish marks for new scrubber technology in a Polish factory which brought about a reduction of SO_2 emissions of less that 0.5 per cent of the national Estonian total (Löfstedt 1995:44).

The problem with such criticisms is that they ignore the cost of the economic decline in the recipient countries. While the current economic climate in the donor countries might not be ideal, to assume that the decrease in pollution (as a result of economic decline) has not cost anything ignores the difficulties experienced by the people of those countries. In addition, since the problems are considered transitory and such countries are expected to be economically similar to the West in the medium term, it would perhaps be more beneficial to recognise the likelihood of an eventual increase in economic development

and assist in the preparation for the associated increases in pollution.

Lönnroth has argued that a more efficient way of gaining environmental improvements is to help the post-communist countries make the transition to a market economy by removing trade and import barriers. This notion has apparently had support, in both Sweden and the recipient countries, from policy makers and academics who believe that a strong economy is needed to achieve a clean environment (cited in Löfstedt 1995:45). If Sweden is serious about promoting the development of the market economy by lifting trade barriers then arguments about the greater benefits achieved from economic decline carry little weight as a reason not to invest in environmental projects. Active development of the market economy in the recipient countries could actually counteract efforts in environmental rehabilitation rather than facilitate them. Environmental guidelines for other foreign investment, then, need to be stringent so as not to make the environmental situation worse (see 6.2.4.5). While it is acknowledged that economic improvements will be necessary in order to successfully implement various environmental projects, the market economy should not be seen as a panacea for environmental ills (see 5.2.2).

It has also been argued that only 1.5 per cent of the total SO_2 and NOx produced by coal plants in Poland actually falls as acid rain over Sweden. Most falls over Poland and its most immediate neighbours or into the Baltic Sea where the damage is limited. For Sweden to install scrubbers in Polish plants, then, would assist Poland and its near neighbours much more than itself. Thus, from Sweden's point of view, this would not be an efficient use of resources. It could only be seen as such if the total environmental benefits for the region as a whole are considered (Löfstedt 1995:44).

The efficiency argument can also take on a more global scale. Western assistance to improve leaking gas pipelines in the FSU would reduce greenhouse gas emissions at a lower cost and with less disruption than decreasing emissions elsewhere in the world (Peterson 1993:254). So, if the improvements to the environment in general are considered, rather than purely those to the donor country, then such investments could still be considered to be efficient. More environmental gain would be achieved than similar measures in donor countries where technically advanced emission control equipment already exists.

The accident at Chernobyl in 1986 highlighted the potential environmental impacts, aside from the ongoing problem of acid rain, that could be derived from sources outside national borders. Hence the direction of funding to the Chernobyl-style plant at Ignalina (see 6.2.3.1). Concern regarding transboundary pollution was an impetus for support, but it was not until three years later when the political climate started to change that Western countries in the region began to give more environmental assistance to Eastern Europe. This points to the intrusion of political motivations in the provision of aid.

6.2.2.2 Responsibility

The responsibility argument has played a central role in the 1990-91 environmental aid debate in Sweden. The richer nations, the argument goes, have a responsibility to assist with the environmental rehabilitation of poorer countries. This is an example of the 'victim pays principle' which is a consequence of the inability of the recipient nations to meet the cost of implementing the 'polluter pays principle' which they have written into their own legislation. The notion of responsibility is cited as one of the main motivations for providing support to the Baltic States. Some have argued that policy makers have a 'bad conscience' about their past relationship with the Baltics. As mentioned earlier there is a strong historical connection between the Baltic nations but many want to make up for past mistakes (such as their failure to support the countries at the time of Soviet annexation) and thus re-establish economic and cultural links (Löfstedt 1995:46-7). Sweden, in particular, has suffered from a guilty conscience as one of the few Western countries to formally recognise the annexation (Lieven 1993:380).

Counter to this is the 'victim pays' contention that such assistance infringes national sovereignty and that the donors are, therefore, ultimately responsible for the projects in the long term. The transfer of technology is a particularly contentious part of environmental aid debates. Donor countries are reluctant to take responsibility for the measures they fund (Löfstedt 1995:47). While this is understandable, they should also accept some responsibility to ensure that the project is successful and does not lead to further problems. As Löfstedt points out, donor countries are 'unlikely to fund a technology's upkeep indefinitely, but adequate attention is seldom paid to equipping the recipient nation with the skills and resources to adequately maintain the technology' (Löfstedt 1995:47) (see also 6.2.4.2 and 6.2.4.4).

The case of Ignalina Nuclear Power Plant is a particularly interesting example. The Swedish Nuclear Inspectorate (SKI) along the National Institute for Radiation Protection (SSI) and two utilities have been involved in the installation of safety equipment at the plant over the last few years. The Lithuanian Ministry of Environmental Protection has since argued that Sweden should be financially liable for the measures that have been installed. The Swedish government has refused on the grounds that Ignalina has some inherent design faults. If not resolved, it is likely that Sweden will withdraw its support which could have implications for its political relationship with Lithuania. Sweden has developed bilateral insurance agreements with its Eastern European recipients in an attempt to reduce the problems of international environmental responsibility (Löfstedt 1995:47).

6.2.2.3 Self Interest

If, as Löfstedt asks, environmental assistance from Sweden is provided primarily to alleviate domestic problems, then efficiency might be measured in terms of the greatest environmental benefits for Sweden alone. If this were the case, Sweden would direct most of the assistance to Poland since, among East European sources, its air pollution has the greatest impact on Sweden's environment. The Baltic States have similar pollution patterns but these are generally less marked. So why provide environmental assistance to the Baltic States? Political factors have strongly influenced the provision of all assistance to the Baltic States. There are strong cultural and historical ties between Sweden and the Baltics. Poland, on the other hand, has historically been seen as an enemy, has a population four times that of Sweden and is, therefore, unlikely to be politically influenced by Sweden. Thus, the funding of a sewage treatment plant in Lithuania would have greater positive political implications than a similar project in Poland (Löfstedt 1995:45).

Economic benefits to the donor country are a strong motivation for the provision of aid. It is most common that equipment and expertise is purchased in the donor country and the salaries, travel, accommodation, meals, and printing costs of consultancies consume a large percentage of the funding allocated. For example, it is claimed that around one third of Danish assistance goes directly to environmental investment and equipment and the rest is consumed by Danish companies and consultants (Chong and van der Hoek 1996) (see 6.2.4.4 below). The Swedish aid agency is actually obliged by law to

employ only Swedish companies and consultants (Chong and van der Hoek 1996). While such assistance may look impressive for the donor countries, it can create, rather than solve local economic or environmental problems in the recipient nation. Thus, the aid is really spent in the donor country, thereby stimulating their own economy. In this way, it is not likely to be economically cost-effective since the higher prices in the donor countries increase total project costs (Chong and van der Hoek 1996). The ideal is a "win-win" situation where the donor and recipient economies and environments benefit from the project.

Another motivation for providing environmental aid (particularly technical assistance) is the development of a market for equipment made in the donor country. Setting up renewable energy projects in Lithuania, for example, provides companies from the donor country with new customers (at least until local companies develop their own technology). This has spin-offs for the economy of the donor nation and, therefore, could also be brought into the efficiency argument. The provision of aid also fosters trade relations in general by increasing communication between the countries and thereby developing a peaceful rapport. Aid based on commercial and political motivations is not necessarily doomed to failure but without the environment or even the recipient's economy as the focus of the project, aid is at least potentially ineffective (Cassen 1986:15).

6.2.3 Where Does Environmental Assistance Go?

6.2.3.1 The Nuclear Bias

Since 1991, Lithuania has received more environmental assistance than the other Baltic States due to concern regarding the safety of Ignalina Nuclear Power Plant. However, if the support for Ignalina is excluded, Lithuania has received the least funding for environmental purposes (Swedish EPA 1995). According to the Lithuanian Ministry of Foreign Affairs (MFA), around USD 151 million (22 per cent) had been provided for energy and nuclear safety between 1991 and 1994 - more than ten times that provided for environmental rehabilitation (MFA 1994). This is significant in light of the argument made elsewhere (see Banks and Todd 1995) that continued investment in Ignalina NPP tends to prolong the inevitable closure, while absorbing funds that may have been used to alleviate other environmental problems. This would assume that such assistance would still be made

available if there was not a nuclear power plant. Obviously concern about the safety of the plant has led to more funding in Lithuania but considering that it would receive the least support otherwise one could conclude that Ignalina does detract assistance from other areas. That is not to say that such assistance has not had any benefits and the direction of aid away from Ignalina could only come in conjunction with serious moves to discontinue its use.

It is not surprising that this sector receives a large proportion of environment related assistance since 'problems related to energy production are perhaps of greatest concern' in Lithuania (Kritkausky 1995:130). The inclusion of energy and nuclear safety figures significantly increases the percentages of contributions for environmental purposes. Most of the projects involved could be included as environmental assistance, however, it is important to separate the two sectors in order to distinguish proportions. In this thesis, the amounts given to this sector have not been itemised to ascertain the percentage given to Ignalina NPP by each donor. However, as an example, Sweden, which has a number of cooperative projects with Lithuania on nuclear safety, provided approximately USD 7 million for energy and nuclear safety between 1991 and 1994 with 76 per cent of this assistance going directly to Ignalina (MFA 1994). Denmark, on the other hand, donated a total of USD 10.6 million on energy and nuclear safety between 1991 and 1995, approximately 11 per cent of which was specifically earmarked for Ignalina. The majority of the Danish contribution (55 per cent) funded renewable energy, conservation, or efficiency projects while a further 33 per cent was directed at the energy system in general including infrastructure development and training programmes for district heating operators (MFA 1995). The Danish EPA actually states their intention to, in cooperation with the Danish Energy Agency, promote projects which 'help Lithuania to promote energy production from sources other than nuclear energy' (Danish EPA 1996a:8).

Most of the countries that have provided assistance to Lithuania have given significant proportions for energy and nuclear safety. Japan has provided just over USD 44 million in aid to Lithuania, 99 per cent of which was provided for energy and nuclear safety. The United Kingdom, which has ongoing agricultural problems related to the Chernobyl accident, provided 35.5 per cent of total assistance for nuclear safety but no other contribution toward environmental rehabilitation. Energy and nuclear safety was also a concern for the USA. The greatest proportion of funds from the USA was provided for the industrial sector with energy and nuclear safety receiving

the second highest (21 per cent) proportion and around nine per cent for environmental projects (MFA 1995) (see Table 6.1).

It is also evident that energy, in particular nuclear safety, will continue to receive a significant proportion of assistance to Lithuania. The MFA databases have listed projects by status; proposed, expression of interest, firm commitment, financing decision taken (approved), underway, completed, and continuous. If the last four categories are taken as an indication of what has been done and the first three categories as indicative of what will be done in the future, it is clear that energy and nuclear safety will continue to gain support whereas assistance for environmental purposes appears to have become of less concern. At the end of 1994, for example, assistance for environmental projects amounted to approximately USD 11.7 million (98 per cent of total environmental aid) while planned assistance (using the first three categories) had a projected cost of USD 227 000 (2 per cent of the total). In comparison, approximately USD 78.6 million had been donated for energy and nuclear safety projects that have been completed, are currently underway, or have had a financial decision taken and approximately USD 72.5 million was planned for the same purposes (MFA 1994). At the end of 1995, the percentage of planned environmental investments had actually increased to 24 per cent of total environmental assistance indicating that interest in the environment has improved, yet it remains a lower priority than nuclear safety. The energy and nuclear safety sector has continued to attract support with USD 81.8 million provided in the same period and another USD 86.8 million was earmarked for projects under consideration, planned, or having received a firm commitment (MFA 1995).

It might be argued that, after the initial concern, particularly in relation to the lack of sewage treatment facilities and the implications this has had for the Baltic Sea, governments and organisations have tended to focus on other issues. This might reflect the diminishing public voice on environmental issues in Lithuania discussed in Chapter 4, since projects are often proposed from within the recipient country. It may also be connected with the priorities of the Lithuanian government who have a role in attracting aid. This would also help explain the much larger amounts provided for economic reconstruction. Problems in the economies of the donor countries mean that priorities had to be set and questions asked regarding whether it was necessary, important, or obligatory to provide such assistance. Nuclear safety has obviously been seen as a priority for environment related assistance.

6.2.3.2 Other Priorities

Waste management has been another major focus of environmental assistance, particularly since the construction of sewage treatment plants is very capital intensive. Construction and upgrading of five sewage treatment works is now underway. Of particular importance is the plant at Kaunas which has a population of over 500 000 and no sewage treatment (see also 3.4.1.1). Financing for the Kaunas plant will come from an EBRD loan and USD 5 million in equities from the Stockholm Water Company which will be supplemented by a grant from the PHARE[6] programme. Sweden, the World Bank, Finland, and the PHARE programme are all involved in financing the Klaipeda plant. Meanwhile negotiations continue (as at 1994 end) with the Danish Government regarding grant and loan financing for the upgrading of the Vilnius plant. Assistance has also come from PHARE for upgrading mechanical equipment (MEP 1994).

The main areas receiving grants through the Danish Environmental Support Fund (ESF) have been water pollution (50 per cent), waste management (21 per cent), air pollution (12 per cent), and agricultural pollution (7 per cent). However, it was agreed by the Danish EPA and the Lithuanian MEP that future activities in the waste water sector will be mainly the responsibility of the Lithuanian Government (Danish EPA 1996a:8 and Danish EPA 1996b:2).

Waste water treatment has also received the biggest proportion of funds from the State budget. In 1994, 150 million litas (USD 37.5 million) was allocated for waste water treatment (3.8 per cent of state budget) and 105 million litas (USD 26.3 million) in 1995 (2.2 per cent of the state budget). This is compared with 1.325 million (USD 0.33 million) allocated for other environmental projects. Once the sewage treatment plants are completed, there is no guarantee that a similar amount will still be allocated to the environment. For example, the allocation to the environment sector in 1996 was reduced by almost a third to 39.69 million litas (USD 9.9 million) amounting to around 0.8 per cent of the state budget (Kalinauskas and Kaminskiene 1996:12 and Arvydas Dragunas pers. comm. February 1996).

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6. Originally set up by the EU to give assistance for economic reconstruction in Poland and Hungary but later expanded to include the larger CEE and FSU region. It has a larger technical assistance element than other lending agencies and has directed funding to education and training (14%), private sector development (9%) and environment and nuclear safety (9%) (Manser 1993:56).

This suggests that the environment sector will not attract the earlier levels of support now that treatment plants are nearing completion.

Other related water pollution control issues include protection of drinking water (EC funded), and Baltic Sea Projects which have included tertiary education programmes, marine protection projects (funded by EBRD, Sweden). Assistance for water pollution, particularly for waste water treatment and Baltic Sea projects, has been influenced by international agreements such as the *Convention on the Protection of the Marine Environment of the Baltic Sea Area* which requires significant reductions inpollution loads (see Chapter 3). There has also been quite a lot of interest in the development of policies, strategies, and the legal framework for environmental management (MFA 1994). For example, the Danish EPA has directed 4 per cent of grants (excluding energy) to 'institutional strengthening' with a focus on capacity building in the areas of environmental protection, resource management, and nature conservation. The ESF has also supported a mission on strengthening related laws such that they approximate EU requirements (Danish EPA 1996a:5 and Danish EPA 1996b:2)

One area which has not received great attention is organisational support for environmental non-governmental organisations (NGOs). The Danish EPA provided funds for the Lithuanian Fund for Nature (LGF) with the aim of improving efficiency and strengthening its capacity to conduct research and develop proposals for nature protection (Danish EPA 1994). Such support is not only crucial for the Lithuanian environment, but it is also an important part of rebuilding the system of democracy in which various interest groups are able to participate in the political process.

6.2.4 Problems and Advantages Associated with Environmental Assistance

6.2.4.1 The Development Approach

Whilst environmental assistance has enabled the development and implementation of several useful projects in Lithuania and the rest of the former communist bloc, there are limitations associated with its relative success. The countries in the region are considered to be 'second world', with some environmental problems indicative of the third world but also with considerable scientific expertise. What has been missing in the past is policy direction and enforcement and, since independence, investment and

technology. The donor countries have been directing their assistance to the Developing World where technical skills are often limited. Thus, agencies might not realise the considerable expertise that exists in the Baltics. The tendency to employ consultants to assess the assistance needed alienates local experts who consider themselves amply qualified for the task. The salaries, accommodation, meals, travel, and printing costs of consultancies consume a large percentage of the funding allocated. Fisher (1992:10) points out that mistrust of domestic expertise also exists within the countries where scientific research has been used to justify now destructive activities. There is also mistrust given the past manipulation of most scientific data, particularly as it related to the environment.

6.2.4.2 Technology, Training, or Investment?

An independent assessment of Swedish environmental assistance to the Baltics focused on critical evaluations from people involved in the recipient countries. The general criticisms were that the balance between technical and capital assistance was tipped in favour of the former; that there was insufficient use of local expertise, and too much use of consultants in technical assistance; that there were often delays in processing projects; and that there was generally a lack of co-ordination and follow-up evaluations (Hägerhäll and Hägerhäll Aniansson 1995:25). Representatives from Swedish industry expressed similar concerns. They pointed out that the role of consultants in assistance programmes was 'at the expense of technology transfer and direct investment projects with tangible environmental benefits' (Hägerhäll and Hägerhäll Aniansson 1995:25). Manser argues that, during 1990-92, only a few projects in Eastern Europe addressed the major problems directly, with most assistance being 'soft'; consisting of 'research, institution building and training, often involving foreign consultants' (Manser 1993:76). There is, then, a view that technical assistance is preferable as it is more likely to achieve practical results. Yet technology and financial transfer are also problematic without education and training.

Löfstedt points out that while in the past most of Sweden's environmental assistance has paid Swedish consultants to prepare pre-feasibility studies, there has been a recent change with the government directly financing infrastructure projects such as sewage treatment plants. He argues that a desire to be seen as serious about its intentions to cleanup the Baltic, and thereby set an example for other Western nations in the region, is behind

this change in the Swedish government's environmental assistance policy (Löfstedt 1995:48).

If Lithuanian authorities are going to successfully develop environmental management skills, training will be important. The Danish ESF concentrates efforts in 'sectors where the Danish knowledge on the environment and technology to protect the environment and nature is especially competent to provide qualified assistance' (Danish EPA 1996a:2). That is not to say that significant expertise does not already exist in Lithuania but one cannot ignore the impact of 50 years of Soviet thinking on the administrators. Assistance with developing such skills should also be backed up by environmental education throughout the school system. The United States Agency for International Development (USAID) has been involved in several education programmes in Lithuania. These have included training of environmental authorities in the principles of environmental impact assessment and risk assessment (October 1993 and January 1994) and strengthening the capacity of environmental educational institutions (April 1994) (MEP 1994).

6.2.4.3 Reliance and Resentment

The issue of reliance appears to be a double edged sword. On the one hand there is the fear of being reliant which is strongly connected with national sentiment and, on the other hand, a tendency to expect assistance. The Ukraine government, for example, has agreed to close the remaining three reactors at Chernobyl as long as the West provides the USD 3 billion to pay for it (Mackenzie 1995:10). While expecting assistance, recipient countries like Lithuania also often resent it at the same time. Being a recipient of assistance automatically puts the country, particularly the personnel involved in specific projects, in a position of reliance and perceived inferiority. This situation is delicate and is at the root of criticisms from scientists about the over-use of foreign experts at the expense of local knowledge. Thus, on the ground level where the assistance is put to use, resentment can arise from the apparent arrogance of foreign consultants, often tied up with both academic and national pride.

The provision of aid can also be a sensitive matter at the government level. As mentioned earlier, it is politically important for the wealthier neighbouring countries to assist Lithuania and disagreements regarding the assistance could have serious repercussions. The strong national sentiment in Lithuania

could lead to a wish not to be reliant on others (such as in the case of the oil terminal discussed in Chapter 2) as well as a feeling of resentment, despite the understanding that the country needs such support. It is unlikely that national pride would lead to a refusal of financial support for environmental clean-up (or for other forms of assistance) yet the fact that national sentiment is deeply entrenched creates a conflict between the notion of a strong nation and the position of reliance. It might be argued that Lithuania is not becoming reliant on environmental assistance, given the figures presented at the beginning of this chapter which indicate the large percentage of funds that are domestically generated. However, it is clear that, for the larger projects at least, the Lithuanian government is reliant on foreign assistance, investment, or loans in order to implement the proposals. Westing (1989b) has argued that environmental cooperation (including the provision of aid for environmental projects) has a role in fostering friendly relations between countries and therefore in creating a greater level of political security.

Assistance should empower the recipient nations to act for themselves. It is not purely the fault of the recipient countries that it often does not. Soft aid that has tended to pay consultants to prepare studies and set up projects reinforces the donor-recipient relationship. Working with local experts is essential as well as ensuring follow-up monitoring, education, and training. One project initiated with this in mind was funded by USAID. The aim of the project is to 'improve the indigenous capacity to address environmental problems' (MFA 1994). Without fostering local capacities, countries like Lithuania will always be on the receiving end of economic and environmental assistance.

6.2.4.4 Project Effectiveness

As mentioned in 6.2.2.2, donor countries are unlikely to provide for the long-term maintenance of a project, however more attention should be paid to evaluation of internationally funded environmental projects and of aid programmes in general. There has been very little evaluation of bilateral environmental assistance in CEE, primarily because donor countries are lacking clear environmental objectives for their programmes, ultimately leading to an inefficient use of funds (Löfstedt and Sjöstedt 1995:368).

The Swedish Government created a Secretariat with the specific task of analysing Swedish assistance. It aims to increase the effectiveness of aid

through achievement of the goals set out by the Parliament, namely 'increased resources, economic and social equality, economic and political independence, the democratic development of society, and the long-term management of natural resources and care of the environment' (Secretariat for the Analysis of Swedish Development Assistance 1994 in Chong and van der Hoek 1996). Such broad objectives, while commendable, are a difficult yardstick for evaluating the effectiveness of aid programmes in general as well as specific projects. The European Investment Bank provides loans meeting their criteria. 'All projects must be economically justified, technically viable and environmentally sound; in addition, productive sector investment must offer an adequate financial return' (EIB in Chong and van der Hoek 1996). The same authors note that measuring cost-effectiveness is difficult and is largely dependent on the bench-marks used. For example, a project with broad goals or lax budgets can meet its limits with ease. The goals established by Swedish Parliament could assist in directing assistance into appropriate areas.

An evaluation has been defined as 'an assessment, as systematic and objective as possible, of an on-going or completed project, program or policy, its design, implementation and results' (OECD in Chong and van der Hoek 1996). Such comprehensive evaluations have not been undertaken very often, although some project-specific analysis of cost-effectiveness has taken place. Evaluations that have been carried out have tended to have 'the (implicit) intention to justify the policy pursued rather than obtain an objective assessment of the results' (Chong and van der Hoek 1996 - their brackets). The Danish EPA acknowledges the difficulty in surveying results but has employed a programme coordinator who will visit ongoing projects in order to assess effectiveness (Danish EPA 1996b:3). Completed projects also need to be assessed if project effectiveness is to be established.

According to Chong and van der Hoek (1996), one of the central reasons for inefficiency is the lack of coordination and control of international assistance. Some surveys have been carried out, such as the OECD survey of CEE assistance, but these do not contain an evaluation of the effects. Some effects are positive such as the reduced pollution in Lithuanian rivers following the construction and/or upgrading of sewage treatment plants. It is not easy to prove this connection given that pollution loads have been reduced through the downturn in production (see Chapter 3). The Danish EPA evaluated the effects of waste water treatment projects in Lithuania in

connection with a report titled *Improvement of the Baltic Sea: Activities Financed from the Danish EPA Funds* which indicated a reduction in water pollution as a result of Danish funded activities, corresponding to the load produced from approximately 95 000 people per year (Danish EPA 1996b:4).

There may be other, perhaps unintentional, effects of international assistance some of which may not be apparent initially and would, therefore, only be identified as part of longer-term evaluations. Some planned effects, too, might not be immediate. Therefore, it is important to have project specific evaluations to assess whether objectives have been met and whether there have been any unwanted side effects. Peterson (1993:255) points out that, given the strong connection between environmentalism and national sentiment in the FSU, a perception of Western exacerbation of environmental devastation has in turn reinforced the 'environmentalist-nationalist nexus'. Thus, the political implications of environmental assistance might not be as positive as countries like Sweden might hope. If environmental projects are unsuccessful (which is possible, according to Cassen (1986), when the aid is given out of self interest or political reasons) then there could be negative political repercussions.

Each donor country should evaluate their overall assistance programme to ensure that the resources have been used efficiently. Of course, efficiency could be subjectively interpreted given the economic benefits to the donor countries outlined in 6.2.2.3. Chong and van der Hoek (1996) note that evaluations have tended to be for internal use and perhaps "accurate" evaluations are more likely from an independent coordinating source. They recommend tandem evaluations from both donor and recipient. This method might be criticised on the basis that it is likely to consume significant proportions of allocated funding.

Economic cost-effectiveness is not the only measure of a successful project yet it does highlight certain problems or benefits of the work. Chong and van der Hoek (1996) suggest ways of achieving cost-effectiveness such as using a tender process for particular needs based projects, asking independent sources for the most appropriate solution to the problem at hand, and following operational guidelines such as those relating to feasibility, tender, monitoring, and post-project evaluation.

What the discussion by Chong and van der Hoek (1996) misses is an analysis

of effectiveness or efficiency in terms of achieving aims outside of completing the project within budget or creating other economic spin-offs. There does not seem to be any attention to results or effectiveness in terms of environmental gain or impact. It is important that the recipient gets good value by using the tender process, for example, but it is also important that the economic, social, and environmental goals of the project are met. Although their paper is not specifically discussing environmental assistance, it does refer to such projects.

An evaluation of the environmental impacts of PHARE programmes in the Visegrad States (Hungry, Poland Czech and Slovak Republics) from the point of view of local NGOs was conducted by WWF UK in 1994 and presented to the European Parliament. The report revealed that, while there were some obvious positive results of environmental programmes such as the transfer of pollution prevention technology, there have been several negative or unknown impacts as a result of PHARE programmes. A major problem identified was an incapacity on the part of the recipient countries to administer the sudden influx of substantial grants resulting in unmeasured and unmet objectives as well as conflicting aims. It was also revealed that there were no mechanisms within the overall PHARE programme to maximise the positive environmental impacts and to minimise the negative effects (WWF UK 1994:5-6). Another concern raised by the report was that:

> the lack of public participation, the difficulties in accessing information on PHARE's operation and results, lack of communication and absence of mechanisms to achieve it and lack of efficiency within the programme. In addition, different projects and programmes are shown to often have contradictory objectives or outcomes (WWF UK 1994:6).

The report focused on programmes in the spheres of energy, environment, nature protection, transport, water management, and agriculture. Thus, the impacts are derived from projects with a general environmental bent, not from those with primarily economic aims which may involve still further environmental impacts. For environmental assistance, in particular, it is crucial that evaluation and monitoring is undertaken to assess the environmental benefits, or perhaps detrimental impacts, of various projects. In such a way, ineffective projects can be avoided in the future. General criticisms from people involved suggest that there are serious problems with the direction of assistance causing inefficiency. In this sense the inefficiency is not so much whether the project over-spent but whether it has been in a priority area and achieved good results. In Lithuania, there

have been few comprehensive evaluations of environmental projects.

6.2.4.5 Linking in Other Assistance and Investment

The financing of environmental projects comes not only from grants but also from private and official loans or investment. Loans are often subsidised in that they involve lower interest rates or longer grace and repayment periods than are available from world capital markets (Bond 1991:4). For example, a World Bank loan of USD 7 million as part of the funding for the waste water treatment facility at Klaipeda on the coast of the Baltic Sea was signed with an interest rate of 7-8 per cent and ten years grace (pers. comm. Winfried Pietersen, PHARE adviser to MEP, November 1994). The project was co-financed (9.1 million) from Finland, Sweden, and PHARE together with a local contribution of USD 7 million (EBRD 1996:32) (see also 3.4.1.1).

Most of the official financial assistance to the CEE and FSU has been provided on commercial terms, with only a small percentage in the form of grants or concessional loans. For the donor/lender, this is seen as appropriate because of the relatively high per capita income in the region as compared with the developing nations (Bond 1991:5). As mentioned in section 6.2.1.2, while international financial institutions can borrow more cheaply than individual countries, they still must operate under normal banking practices, thus requiring a reasonably high security for the loans. Hansen (1995:21) argues for subsidised loan agreements and for a merging of aid with either commercial loans or profit from the World Bank's activities in order to lessen the burden of interest repayments.

Many loans also carry conditions relating to the recipient's policies. Private loans are primarily commercial considerations (such as risks involved in securing repayments) but official financial transfers are often influenced by the economic, social, and political policies of the recipient country. The EU, for example, requires 'recipient countries to have pluralistic political systems with no institutionally favoured party, to make movement toward free market economies, to have free labour unions, and to demonstrate respect for human rights' (Bond 1991:6). An IFI study stressed that all assistance to the FSU should be predicated on the commencement of major structural reforms. However, interestingly, they suggested that projects in the energy and environment sectors might be excepted given that they could have immediate benefits for the FSU and the world (Bond 1991:34). So, in some circumstances, the environmental projects escape political involvement. However, it is also apparent that the increasing hard currency debt has political, economic,

social, and environmental ramifications.

The increasing debt is a burden which governments might attempt to ease by inappropriate means such as allowing environmentally unsound investment. Therefore, it is also important that foreign investment and assistance be administered in an environmentally sound manner. The Lithuanian Government introduced 'Environmental Guidelines for Foreign Investors' which outline the legal obligations of potential investors (see 7.4.1.6). It is also important that Lithuanian governments do not fall into the debt cycle where they must continue to borrow whilst only repaying interest on existing loans. A situation is possible as in the developing countries of the South where 'indebtedness is a major factor contributing to poverty and environmental destruction' (Lang and Hines 1993:84). The structural reform specifications relating to loans from major lending institutions such as the IMF and the World Bank have focused on earning more and spending less. The implication here is that spending is usually cut in areas such as health, education, and the environment (Lang and Hines 1993:85).

6.2.5 Implications for Environmental Policy in Lithuania

As with the economic, political, and social record of the recipient country, environmental policies could be an important factor in the decision whether or not to provide environmental assistance. Some might argue that environmental assistance is pointless where legislation and guidelines continue to permit the destruction that the assistance is designed to remedy. Such an argument has been presented by Cassen (1986) in relation to the aid debate in the 1980s which focused on economic development to relieve poverty in the Third World. He acquits aid of a bias toward particular countries based on economic policies but recognises that donor countries must make the judgement when deciding the destination of aid (Cassen 1986:243). The argument is also relevant in relation to environmental assistance to the former communist bloc. Given this potential situation, donor countries might, once again, question their contribution in terms of the efficiency argument.

Lithuania has begun developing environment related legislation (including EIA, environmental protection, pollution taxes, an environmental guidelines for investors) which should ease any concerns of donor countries. Much of the legislation has been developed with the help of funding from PHARE, USAID, and Danish EPA (MEP 1994). The *National Environment Strategy* for Lithuania was also funded by PHARE (see 7.4.2). Funding the development

of environmental legislation might be one way for donor countries to ensure that other environmental assistance is not wasted. Yet, as noted by Fisher (1992), often the administrative structures are not equipped to cope with the deluge of new legislation, thus widening the gap between legislation and its implementation. In addition, as discussed above, aid, loans, and investment in other sectors may have serious implications for the state of the environment. It is also essential that Lithuania does not become reliant on outside assistance for environmental rehabilitation as it pursues other priorities. Further conclusions are presented at the end of this chapter.

6.3 **Legal and Fiscal Strategies for Domestic Environmental Investment**

Although international assistance has been important, and will remain so in the medium-term, domestic investment in environmental clean-up and protection has exceeded foreign aid.[7] There have, however, been difficulties financing the many necessary environmental improvements. As the previous chapter demonstrates, this is primarily due to the limited budget of the Lithuanian government which has been faced with reforms in all spheres of society. Thus, as well as budget allocations, the Lithuanian Government has relied heavily on fiscal strategies for generating environmental protection funding.

The amount allocated for environmental purposes (primarily related to construction and upgrading of sewage treatment plants) is still comparatively small in relation to other domestic investment. In 1993, the Lithuanian Government allocated around 1.3 per cent of the national budget for environmental purposes. This dramatically increased in 1994 but dropped again in 1995, with the allocation amounting to around 3.7 per cent and 2.2 per cent respectively. The latter allocations were skewed toward waste water treatment with at least 80 per cent funding the new plants. In 1995, 106.715 million litas was allocated for the environment sector. Waste water treatment received 105.4 million of this through the Public Investment Programme (see 6.3.2.2). The remainder was allocated to the Ministry of Environmental Protection (Arvydas Dragunas pers. comm., February 1997 and MEP 1995b, Section 9:3, 11). The 1996 allocation dropped significantly (to 0.8 per cent) as the demands of treatment plant construction decreased (Arvydas Dragunas pers. comm. February 1996). The *National Environment Strategy*

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[7] Excluding funds allocated to nuclear safety. Domestic allocations to Ignalina are included in the Energy Ministry's budget. The domestic allocation would perhaps not be greater if private foreign investment were also included in the total international contribution.

acknowledges the skewing of public sector environmental financing to waste water treatment as a disadvantage since virtually no finance is made available for other environmental protection projects (MEP 1995b, Section 9:5). A greater proportion of financing is generated from sources other than the state budget.

Regardless of which political party is in government, finances need to be raised for environmental rehabilitation and protection. The ideological orientation of those in power will have an influence on the perception of, and therefore priority given to, the environment and the types of strategies that are employed to raise such funds. The general belief in Lithuania has been that the prevailing economic conditions necessitate the delay of environmental investment until the economy has sufficiently recovered. Therefore, a significant proportion of the funds allocated are raised by fiscal means rather than directly from the budget.

The priority given to economic reconstruction and the consequent market orientation of policies has influenced Lithuanian environmental policy in a number of ways. Firstly, it has limited the domestic allocation for environmental purposes. Secondly, it has led to market orientated approaches to raising capital for environmental investment such as permits, charges, and taxes. Thirdly, some environmental problems have been exacerbated by the economic approach of the government which may have long-term consequences.

The use of economic instruments in environmental policy is codified in Chapter VI of the Law on Environmental Protection 1992. The law states that the 'ecological and economic interests of the state shall be coordinated by the economic mechanism of environmental protection' such as taxes on resource use, charges for pollution, economic sanctions and compensation, state subsidies, price controls, and credit policies (Supreme Council of Lithuania 1992b). The first three are the main mechanisms used in Lithuanian environmental management, the last two are not in use at all, while subsidies for environmental protection measures are primarily offered to the state sector (Semeniene *et al.* 1996:2).

Although there have been some problems in collecting taxes and fines owed, this has improved over the last three years. In 1992, the amount generated in this way was USD 3 million which increased to 4.55 million in 1993 and to 10 million in 1994 (Edmundas Greimas pers. comm., September 1995). The following section provides an overview of the strategies used in Lithuania

to raise finance for environmental investment while discussing the overall benefits and disadvantages of the system in place.

6.3.1 Pollution Permits, Charges, and Penalties

Environmental management in Lithuania is a mix of administrative measures (emission standards) and economic instruments such as pollution charges and natural resources taxes (Varneckiene 1997). As enshrined in law, the aim of the charges is 'to stimulate pollution abatement and reduce the harmful impact on environment' (Supreme Council of Lithuania 1991b). Semeniene *et al.* (1996) argue that the system does not achieve this aim as well as it might, yet it represents a commitment to the "polluter pays" principle (PPP) which may be developed in the future. Other possible aims are identified by Bluffstone (1995) including financing environmental investment, "Greening" the tax system by substituting income taxes for pollution charges, and achieving a target level of emission reduction. While the system may be falling short of its stated goal of influencing the level of emissions by polluters, it appears that its main focus is the unstated goal of providing finance for environmental investment. Although this, too, is not as effective as it might be (see 6.3.1.2).

Each enterprise must obtain a permit which stipulates its maximum emissions and/or extraction of natural resources. Each permit is composed of four parts: air, water, waste, and natural resources. While in the USA, a developer would need to obtain a separate permit for each part of the operation (Harrington 1993:8), Australian counterparts have an inclusive permit such as in Lithuania. The Ministry of Environmental Protection determines the standards and issues the permits. The focus in this thesis is on emissions although it is worth noting that permitting of waste disposal is in its infancy. No permit is required for disposal of non-hazardous waste and a permit for hazardous waste disposal has only been required since 1992. As a result, information on hazardous waste generation and disposal has been poor but data collection since that time will improve the situation (Harrington 1993:9).

There are two types of permits; Maximum Allowable Pollution (MAP) Permits and Temporary Allowable Pollution (TAP) Permits (see 6.3.1.1). The system consists of base rate charges (for emitting an agreed amount) which are indexed quarterly, penalty rates when emissions exceed standards, and preferential rates when emissions are below the agreed MAP. Emitting below the agreed level opens the way for possible trading of pollution permits (see 6.3.1.3). Charges are estimated at the beginning of each year and are paid

quarterly, in advance, on the assumption that companies will emit the agreed maximum. The account is settled at the end of the year to ensure that the amount owed is equal to previous payments (Semeniene *et al.* 1996:14, Varneckiene 1996).

The unit charge for various pollutants increases along with emissions levels, therefore 'the *rate* an enterprise pays for emissions of a given pollutant will be different from that paid by any another enterprise' (sic) (Semeniene *et al.* 1996:14). If an enterprise emits a particular pollutant at a level less than 50 per cent of its agreed standard, it pays *no* pollution charges. Also, if an enterprise emits less of one particular pollutant, a preferential rate is applied to *all* pollutants it emits. Likewise, to those that exceed their level, a higher rate is applied to *all* pollutants emitted and not just those exceeding the permitted level. This, potentially, creates a relatively high marginal penalty rate and, therefore, incentive to maintain emission levels below their MAP or TAP permitted levels (Semeniene *et al.* 1996:15). The incentive tends to be reduced once the MAP level is crossed (see 6.3.1.2).

6.3.1.1 Maximum and Temporary Allowable Pollution Permits

The MAP is not a static level which, if exceeded, companies are required to pay a penalty. Rather, it is a firm-specific level of allowable pollution negotiated by individual enterprises and the MEP. The limits are set so as to not disturb the ambient air and water quality standards for which every location has a Maximum Allowable Concentration (MAC). Most ambient norms are derived directly from the Soviet system and include a range of hazardous substances which have never been emitted in Lithuania or will not be emitted in the future. Some of the ambient standards are more strict than those in the EU or US and many are currently under revision (Varneckiene 1996).

TAP permits are typically less strict than MAP permits, offering enterprises an opportunity to phase in environmental improvements. If an enterprise cannot meet the determined MAP standards, very often they convince MEP departments to replace them with TAP standards. The TAP levels are negotiated between Ministry inspectors and the firm. TAP permits can also be allocated if the emissions from a proposed economic activity lead to violation of the MAC (ambient standard) for the area (Zajankauskaite 1995:6). The TAP permits have a maximum duration of 5 years and must specify the time-frame for reaching MAP standards in the future. TAP permits are most often obtained by water polluters. In a random sample of 366 sources,

all of which met the criteria requiring them to calculate their MAP levels, around 76 per cent were operating under TAP permits (Varneckiene 1996, Bluffstone 1995:7, and Semeniene *et al.* 1996:9-10).

The widespread use of TAP rather than MAP permits, argues Bluffstone (1995), undermines the regulatory structure outlined in the legislation yet it also highlights the necessity of ensuring that meeting MAP standards is economically possible when distributing permits. He suggests that because many polluters do not have access to information about possible technological improvements, or have limited available funds for investment, 'making such deals with inspectors is really the only recourse for sources having difficulties complying with MAP standards' (Bluffstone 1995:7). Because the technology is generally older, achieving a given percentage reduction in emissions is potentially cheaper in Lithuania than in Western countries. The problem seems to be that despite the fact that low-cost (or even no-cost solutions) for emissions reduction are available in Lithuania, there are no incentives given to polluters to seek out those solutions. Theoretically, charges for pollution should be an incentive to invest in technological improvements. However, since,

> the charge rates for most pollutants are too low to influence behaviour, the system operates like a pure standard regime ... in that emissions are kept below the MAP level, but no other incentives or opportunities for adjustment are provided by the system (Bluffstone 1995:14) (see 6.3.1.2).

6.3.1.2 Advantages and Limitations of the Permit System

The main advantage of the system is that charges for deviating from the "standard" raise revenue for the state and municipal environment funds (see 6.3.2). In 1994, for example, a total of USD 5.4 million was raised from base rate charges and penalties for above-limit emissions. Approximately 70 per cent of collected charges are allocated to municipal environment funds with the remaining 30 per cent going to state coffers. The average annual contributions to these funds is USD 250 000 which is inadequate for large investments such as required for waste water treatment plants.

The revenue raised from penalties for exceeding standards is accumulated in the State Nature Protection Fund (Semeniene *et al.* 1996:3, 13-4) (see 6.3.2). However, the same report highlights the inadequate level of fines which limit their capacity to act as an incentive not to pollute (Semeniene *et al.* 1996:18-21). Thus, revenue raised from penalties could also be potentially greater. Harrington (1993:22) points out that the high inflation rate in

Lithuania since the restoration of independence has meant that enterprises prefer to pay the penalties than reduce emissions. Yet, inflation also erodes the value of fees and collected revenue. This is not easily remedied since the charge rates are specified in the legislation rather than a regulatory measure outside the law, thereby restricting flexibility in adjusting rates in line with economic change (Bluffstone 1995:5).

An analysis of the marginal cost of increasing pollution by one unit when operating under a MAP permit highlights a problem with achieving the emissions reduction goal and with revenue raising. The cost to polluters if they keep emissions below the MAP is very low. Thus, there is a tendency to keep just below the MAP, in order to avoid penalties which means there is a low contribution to the State Nature Protection Fund. The marginal cost jumps sharply at reaching MAP but, once crossed, incentives to reduce dramatically decline. Just crossing the MAP level increases the charge by 137 times compared with the basic rate. For polluters who emit way over their MAP, the charge rate drops to 3.2 times the basic rate (Bluffstone 1995:7). So while there is some incentive to keep emissions below the MAP, if they are too strict, or if an enterprise chooses to pollute more, there is little incentive to avoid such emissions. 'In fact, the feature that the marginal penalty falls so sharply after the MAP emission level has been crossed implies that at emissions levels near the MAP point incentives can be somewhat perverse' (Bluffstone 1995:14). It is also important that other tax incentives (such as allowing charges to be tax deductible) do not counteract both the revenue raising and the emissions reduction functions (OECD 1995:33).

The complexity of the system could be seen as a disadvantage, particularly because its administration is so resource-intensive. '[T]his complexity probably contributes little to achieving the environmental goals of the Republic' (Semeniene *et al*. 1996:26). Maximum Ambient Concentrations have been established for 500 air pollutants and the MEP currently assesses 100 air pollutants and 51 water pollutants (Environmental Protection Department 1992). Since there are around 600 major emission sources, a large amount of monitoring is required in order to be effective (Harrington 1993:11 and Varneckiene 1996). Bluffstone (1995:12) suggests that, in light of the enforcement capability of the MEP, some pollutants could be eliminated from the list. He argues that Lithuania will need to harmonise the charge system with the goals the Government has indirectly set itself through becoming a signatory to international agreements. Such harmonisation would include adjusting those ambient standards which are more strict than

in Western Europe because they are seen as placing an excessive compliance burden on Lithuanian enterprises (Semeniene *et al.* 1996:27).

A problem of incompatibility arises when both the stated goal of pollution abatement and the unstated goal of generating finance for environmental purposes are considered. If the system is meeting the aim of reducing emission levels, available revenue will decline over time. If the main aim is to raise revenue, the danger is that a reliance on the income source develops, implying that pollution should continue (Smith 1993 in Lehoczki and Peszko 1994:26) (see also 5.4.4.3). For this reason, penalties and fines should not be the main source of revenue for Environmental Funds which reallocate the collected penalties (Lehoczki and Peszko 1994:27). Government allocations and private investment are necessary contributors (see 6.3.2). In general, the environmental taxes and charges in the CEE and FSU are too low to act as an incentive for reducing emissions, leaving revenue raising as their main function. Even when fines are higher it is important that infringements are adequately patrolled and limits enforced. The expected cost to a polluter is the probability of detection multiplied by the size of the fine. When the probability of detection is very low, as identified in the Lithuanian system, the expected cost of violation is low even if the fine is high. (Andréasson, 1992:6).

The low level of fines in Lithuania, together with problems of collection and the prevalence of TAP permits mean that the revenue raising function is also limited. There is even the possibility that the Lithuanian Government 'is actually losing money in calculating, administering, and collecting charges' (Varneckiene 1996). Trading pollution permits could further decrease the amount of revenue available for the State Nature Protection Fund (see 6.3.1.3).

6.3.1.3 Trading Pollution Permits

Air pollution permits often include multiple sources within an enterprise allowing them to propose an increase in emissions from one source, provided emissions have been reduced from another source and ambient air quality is maintained. Trading across enterprises is also possible, but, as at 1995, no documentation of such practice existed in Lithuania (Semeniene *et al.* 1996:9). It has been argued that allowing permits to be transferable within an appropriate region increases the cost-effectiveness of the system. Following from this, Semeniene *et al.* (1996) suggest that this aspect of the system should be made more explicit and actively promoted. They argue that the burden of calculating standards already rests with the firms so it would not

be difficult to allow firms to propose permits involving bubbling[8] of sources within the enterprise or netting emissions with other enterprises in the region (Semeniene *et al.* 1996:25, 28-30).

Given the current low charge rate, tendency to grant TAP permits, and infrequent application of penalties, also noted by Semeniene *et al.* (1996), it could be argued that trading standards would reduce MEP revenue further (in particular the State Nature Protection Fund) while keeping aggregate emissions the same. It may be cost-effective for the enterprise, and even the MEP in terms of administrative costs, yet it does not appear to be helpful in achieving the goal set out in law 'to stimulate pollution abatement and reduce the harmful impact on environment'. If an enterprise can receive more money by selling their "excess polluting capacity" than by receiving the preferential rate for the reduction or if an enterprise can buy excess capacity for less than applicable penalties then they will do so. In each case the MEP loses funds for environmental protection and the overall pollution is not decreased. It has been suggested that this be avoided by permitting the discharge of only a fraction (say 90 per cent) of the capacity purchased, resulting in a net reduction of emissions (Harrington 1993:34). Harrington also notes the possibility of governments purchasing and retiring emissions capacity.

Because such trading has not begun in practice, it is not clear whether a company that has reduced emissions and sold their "excess polluting capacity" would still receive the preferential rate for emitting below their MAP. If this were possible, environmental revenue is further reduced. Harrington (1993:30-1) highlights a problem with establishing rules for the trading of permits from a closed plant. While plant closures offer a sure way of reducing emissions, there could be difficulties in Lithuania where numerous closures are likely. The question is whether enterprises should receive emission credits from others that were going to shut down anyway?

Bluffstone (1995:14-15) points to the extensive use of tradeable permits in the USA to regulate air emissions. The focus is on the quantity, rather than the price, of pollution and on allowing enterprises to trade permits giving them a greater flexibility in complying with environmental standards. This reduces the cost of meeting environmental goals. Smaller and less complex examples

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[8] Bubbling refers to calculating total emissions for the enterprise or for a region, rather than from each stack or emission source, allowing a company to have increased emissions from one source if that increase is compensated for a decrease in the same type of emissions from another source.

are found in countries more similar to Lithuania. In Poland, for example, it was found that trading of air pollution permits significantly reduced compliance costs. In one case, a firm would have had to be closed because it could not meet the air quality standards. Bluffstone argues that the trading of permits reduced costs and saved jobs. This might be true, however, what is the environmental benefit? A polluting factory has been allowed to continue production solely because another firm was able to reduce it's emissions. Such practices will not help reduce total emissions. Rather, it maintains emissions at the level framed within maximum ambient concentrations but which has often been arbitrarily agreed upon by Ministry inspectors and enterprise managers (see 6.3.1.1).

6.3.2 Environmental Funds

Environmental Funds are institutions designed to channel earmarked revenues (OECD 1995:9). In the CEE and FSU, environmental funds have emerged as an important and useful financing mechanism for environmental rehabilitation and protection. Comprehensive Environmental Funds[9], in particular, can be effective instruments for the re-allocation of environmental taxes and pollution permit charges and penalties. They are a policy instrument as much as an economic one. With a clear set of priorities for environmental spending developed by the Ministry, the Funds can redirect funds from polluters to address specific environmental problems (Lehoczki and Peszko 1994:1, 10). Particularly in times of political and economic difficulties, they act as a useful mechanism for creating a more secure source for environmental investment in the longer-term (Lehoczki and Peszko 1994:11). In terms of environmental planning, Environmental Funds have the capacity to support and facilitate both the development and implementation of Environmental Action Plans (OECD 1995:13-4) (see 5.4.2.1 and 7.4.3).

Environmental Funds may also facilitate the development of skills and expertise required for preparation and evaluation of environmental projects, leading to better environmental management (OECD 1995:13). In addition, they can act as a catalyst for further involvement from the private or commercial sectors in financing environmental projects. Presumably, once

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9. Comprehensive Environmental Funds provide finance for a wide range of environmental purposes. Specific Environmental Funds, on the other hand, focus on a single need such as water quality management. The latter is most common in developed market economies and the former is the usual type used in CEE and FSU. (OECD 1995:9-10). The remaining discussion on Environmental Funds refers to the comprehensive type found in the transition economies.

the economic situation improves and the banking sector plays a greater role in financing projects, the need for comprehensive Funds will decrease (Lehoczki and Peszko 1994:11).

The usual source of finance for Environmental Funds is pollution charges. International assistance in the form of capital grants and allocations from the State budget also contribute. The Funds can direct foreign assistance toward nationally prioritised projects (such as outlined in the National Strategy), which could overcome the problem of ineffective projects designed by the donor and not necessarily based on recipient needs. State allocations are usually for a specific project, and in this way, Funds are used primarily as a vehicle for transferring money.

Lehoczki and Peszko (1994) argue that it is important for the emissions charge system to be easy to enforce and monitor in order to supply the Funds with sufficient capital. As noted in section 6.3.1.2, the Lithuanian system is very complicated which may be a hindrance to supplying the State Nature Protection Fund with adequate finance. Product charges[10], it is argued, may be more effective in providing a stable source of revenue for Environmental Funds in transition economies. Product charges are generally more easily enforced and are more readily incorporated into the tax system (Lehoczki and Peszko 1994:3-4, 28).

Despite the advantages of Environmental Funds, it has been argued that they should be considered as transitional instruments. It is argued that, in the longer-term, earmarking public resources can become inefficient. Not least of which is the issue of high inflation in the region which could erode the value of revenue placed in Environmental Funds (Lehoczki and Peszko 1994:30). There may be long-term environmental management issues such as waste water treatment that will continue to require state funding but these might be better addressed through Municipal development Funds or utilities' agencies (Lehoczki and Peszko 1994:1-2).

In terms of market economies' standards, the continued use of Funds, the argument goes, 'is a "second-best" solution as an environmental policy instrument' (OECD 1995:9). However, it could also be argued that the existence of such Funds ensures at least a measure of commitment to environmental

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[10] Product charges can be on inputs such as chemicals or fuel or on final products that impact on the environment at the time of consumption or disposal (Lehoczki and Peszko 1994:27).

protection on the part of governments. After all, it is not only in transition economies that competing sectors place demands on governments for budget allocations. Government allocations to such Funds, then, are important and may help alleviate the reliance on raising revenue through pollution charges. In addition, the existence of Funds secures at least a portion of collected revenue for environmental purposes rather than for general government coffers from where it may be allocated elsewhere. Section 5.2 highlights the connections between the environment and other sectors of society and stressed the importance of integrating these in policy decisions. So, while it may be that as the economy develops 'resources [from Funds] may be channelled into problems that are no longer priorities' (OECD 1995:15), a commitment to environmental protection and social equity is crucial to economic success and a sustainable society.

It was reported in March 1995 that EU PHARE were considering a 2.5 million ecu grant for the establishment of a new Environmental Fund in Lithuania (Penn 1995:12), suggesting a measure of faith in Environmental Funds in general - perhaps with some modifications. Penn (1995) recommends restructuring the Fund to create a "financial assistance programme" offering interest rate subsidies to borrowers (municipal governments or enterprises) who intend to use the loan for environmental investments (Penn 1995:12).

6.3.2.1 State Nature Protection Fund

As a first step to create a permanent source of funding for environmental protection, the State Nature Protection Fund (NPF) was established in 1988. This preceded the related laws of independent Lithuania such as the Law on Taxes (1991) and State Owned Natural Resources and the Law on Charges on Environmental Pollution (1991) which created the system of economic instruments discussed above (Semeniene *et al.* 1996:3). Penn (1995:12) recommends restructuring the NPF into a financial assistance programme whereby borrowers, typically municipal governments but also private industry, could have access to interest rate subsidies for environmental investment. Given the low incentive of fines and charges discussed above, such a programme could be useful in encouraging environmental improvements.

6.3.2.2 Lithuanian Public Investment Programme

On January 23, 1995, the Lithuanian Parliament adopted a Public Investment Programme (PIP) for the period 1995-1997 proposing 916.2 million litas (USD

229.05 million) for financing environmental projects through municipal budgets (Penn 1995:3). The PIP is a combination of State budget allocations, foreign grants or concessional loans and municipal resources. Each year, the PIP will have to be approved as part of the State budget[11] (Penn 1995:3). It presents Lithuania's sectorial investment priorities and provides direction to potential donors and lenders wishing to provide financial assistance to Lithuania. The priority sector areas are energy, transport, and environment (MEP 1995b, Section 9:3).

Agriculture is allotted only 1 per cent of investment despite the need for large investments in technological improvements for farming and for the storage of fertilisers, pesticides, and manure. The energy sector is the most heavily supported by the programme (46 per cent), followed by transport (28 per cent), and environmental protection (13 per cent) (Kalinauskas 1996:19). Ninety eight per cent of the environment allocation is earmarked for waste water treatment (Penn 1995:3) (see Chapter 3 and 5.4.3.1).

The environmental allocation includes that provided from the state budget, combined with secured or expected international grants or loans, an municipal funding. In 1995, the 105.4 million litas allocated from the state budget for waste water treatment amounted to 41 per cent of the total PIP environment allocation for the same year. Approximately 51 per cent was derived from international grants or loans (MEP 1995b, Section 9:3). The *National Environmental Strategy* (MEP 1995b, Section 9:3) indicates that allocations from the state budget would increase in 1996 and 1997 to 161.6 and 166.2 million litas respectively. As mentioned in section 6.1, the environmental allocation actually decreased significantly to 39.7 million litas, confirming the declining priority given to environmental issues, as well as questioning the value of such investment programmes for environmental protection.

6.3.2.3 International Assistance and Environmental Funds

Environmental Funds can administer foreign resources in the form of grants or concessional loans from bilateral donors or commercial loans from IFIs. The main advantage of this is that finances are distributed based on the prioritised needs of the recipient country. Some people involved in implementing aid projects at the ground level in Lithuania criticised some of the projects derived in donor countries. Sometimes this is due to the

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[11] The National election in October where the government is expected to lose control of the Parliament may affect such initiatives as the PIP (see also Chapter 7).

self-interest motive which leads to projects that are designed to suit the expertise and technical capacity of the donor country at times ignoring the needs of Lithuania (see also 6.2.2.3 and 6.2.4.2). The Funds also provide an opportunity to match foreign assistance for specific capital-intensive projects (Lehoczki and Peszko 1994:33).

Donor countries might also use Funds to direct their assistance. The Danish Environmental Support Fund for Central and Eastern Europe, for example,

> provides support to activities limiting pollution through air, water and waste, supports the strengthening of the institutions that are responsible or involved with the effort to reduce pollution, and supports efforts for the preservation of natural amenities (Danish EPA 1996a:1).

Interestingly, as part of the strengthening of the institutional framework for environmental management in Lithuania, the ESF aims 'to promote the development of a flexible, result-orientated approach towards permitting and management of industrial pollution'. The related project is currently under review (Danish EPA 1996a:5).

Problems with using Environmental Funds to channel foreign assistance include the possibility of divergent priorities and procedures. The liability is also an important question since Funds are separated from the State budget and governments may disclaim any responsibility; a sovereign guarantee must then be negotiated (Lehoczki and Peszko 1994:33) (see also 6.2.2.2).

As shown in the first section of this chapter, much of international assistance to Lithuania comes in a technical form for specific purposes and is not, therefore, easily channelled through an Environmental Fund. However, if capital assistance were placed in such Funds, the recipient country would have more control over spending and therefore be more efficient in meeting local needs.

6.3.3 Private Investment in Environmental Projects

Private investment in the environment is extremely limited, particularly since financial profits are not always lucrative. There is scope for private investment in Lithuania in environmental improvements in areas such as recycling and eco-tourism, which could also have financial returns. It is not possible to discuss these in detail but environmental protection measures, including habitat protection or improving water quality in lakes would be beneficial for companies promoting tourism outside the cities. The Soviet recycling system collapsed soon after the restoration of independence and it

quickly became uneconomical for municipalities to pursue collection. The numerous collection points known as "punktas" gradually disappeared. By 1996 even conscientious companies (including Shell Lietuva) had difficulty in finding a way of off-loading the growing mountains of used office paper. Developing an efficient system of collection and processing and a market for the recyclables is a potential environmental project for a private investor. This would reduce the amount of waste being burned or landfilled whilst also reducing the load on municipal waste management system which has struggled with the increasing waste and restricted budget since independence.

As noted above, industry investment to improve the environmental impact of their operations is also limited as companies are reluctant to spend limited resources on such improvements and certainly not beyond their legal obligations. Education on available technology and possible "win-win" process changes might help direct company resources to this area. There is certainly evidence to show that even small improvements can be both economically and environmentally rewarding (see Tiberg 1992).

Limitations to economic investment in Lithuania apply also to the environment sector. But there is an added factor which has an impact on the willingness of other countries to supply finance or equipment whether in the form of aid or private investment. The question of responsibility is a hindrance to investment in environmental projects, particularly if they are related to the nuclear power plant or if they are experimental. Investors do not want to be held responsible for technical breakdown or environmental pollution associated with their projects. Mackenzie (1994:12) noted such concerns in relation to upgrading RBMK nuclear reactors (see also 6.2.2.2).

Foreign investment in Lithuania has increased from USD 8 million in 1991 to USD 360 million in 1995. By amending the 1990 law on foreign investment in 1995, the government has provided a number of incentives to encourage investment including the removal of permit requirements and three years income tax free for investments over USD 2 million (with at least 30 per cent foreign capital) followed by a 50 per cent exemption (EBRD 1996:7). While incentives are a necessary part of economic recovery, this should not be at the expense of environmental obligations to which the companies are subject in other countries. Depending on the activity proposed, there are various categories of 'environmental risk' which then determines the process of Environmental Impact Assessment including the authority responsible for evaluation. The MEP has overall responsibility for the environmental

review and approval process in Lithuania (Bank of Lithuania 1995:21). The legal requirements are outlined in more detail in section 7.4.1.3.

Foreign investment itself has tended to exacerbate environmental problems in the post-communist region, counteracting some of the investment in environmental rehabilitation. The largest investors in Lithuania are the companies Philip Morris, Kraft Jacobs Suchard, and Shell (EBRD 1996:7) which do not have a good environmental reputation. The theoretical priority given to the environment by the new governments and their original enthusiasm for developing alternative approaches to development were largely subsumed by the policies of privatisation and the reduction of controls in order to foster foreign investment, particularly from multi-nationals. Few were direct attempts to avoid environmental restrictions but, asserts Manser (1993), where a beneficial deal could be negotiated, it was. Some of the contracts that have been negotiated in the CEE would not have been tolerated in the West. For example, investors have 'sought ways to avoid paying environmental fines, to obtain subsidized sulphur dioxide polluting power or to set up operations firmly regulated elsewhere' (Manser 1993:14-15). The introduction of multi-nationals encouraged consumerism and actually tended to increase waste. In the early days of independence, governments in the region were quite firm about their commitment to the environment. However, as time went on foreign debt increased and unemployment rose dramatically leaving the often unstable governments unable to dictate environmental conditions of investment (Manser 1993:15).

6.4 **Conclusion: The Future of Environmental Financing**

Environmental financing in Lithuania is generated from a combination of domestic and international sources. International assistance has been an important feature of economic development and environmental rehabilitation since the restoration of independence. The domestic contribution has been greater in some areas but outside funding will still be necessary for capital intensive projects in the medium term. Both international and domestic contributions for environmental improvements could still be increased given that, proportionally, environmental investment is only a fraction of that directed toward the economic sphere. This indicates that environmental issues have not retained their priority position on the political agenda and that commitment to environmental rehabilitation is not perceived as politically expedient (see also Chapter 5).

The environment is certainly an issue in Lithuania as the general focus of

international assistance from countries in the immediate area demonstrates. But assistance is a business - as the motives of donor countries indicate - and is not necessarily, therefore, an indication of environmental concern or commitment. The aid system in all countries is actually predicated on tangible (usually economic) benefits to the donor. It does not pretend to be otherwise. The domestic contribution also indicates a certain level (albeit it fractional to economic support) of interest in environmental rehabilitation. Environmental protection issues receive far less than economic issues. While domestic investment indicates some support for environmental rehabilitation and protection it does not demonstrate a commitment to environmental sustainable society in Lithuania. The allocation has already declined since waste water treatment plants near completion. Further, a purely fiscal approach to providing finance for the environmental sector, relies too heavily on polluters (a "right to pollute"), placing no responsibility on the government to commit reasonable allocations of the state budget.

International funding has been generally motivated by self-interest, particularly in the perceived economic (and, to some extent, environmental) benefits for the donor country. The focus has been on nuclear power which may have detracted funds from other priority issues. Waste water treatment has also received significant attention from both domestic and international sectors. It is, understandably, a priority given the poor state of water quality (see Chapter 3) which has economic, social, health, and environmental implications to both donor and recipient. Such assistance has also been influenced by international agreements such as the Helsinki Convention on the protection of the Baltic Sea. The effectiveness of such assistance could be improved by an acceptance and use of local expertise and by carrying out more comprehensive evaluations of individual projects as well as overall assistance programmes.

The system of generating internal funds for environmental rehabilitation and protection is very complicated and is not very effective in achieving its aim of pollution abatement. Nor is it effective as a revenue raiser. There are a number of complicating economic circumstances which have restricted the effectiveness of the system. The level of fines could be higher which might make it more economical to implement improvements than to be subject to penalties. However, the tendency is to avoid fines by transferring to a TAP permit, in which case, the level of fines becomes irrelevant. The economic situation, outlined in Chapter 5, has limited the ability of companies to survive the so-called 'transition period' and the investment required to

meet their MAP levels is often seen as too high. Therefore, the proliferation of TAP permits is directly related to the perceived need to assist companies through the difficult economic period with a plan for meeting those standards in the future. Also, as noted by Bluffstone (1995), enterprises are not always aware of the potential technological improvements available to them, often at low cost.

All assistance and investment should involve training and education, make use of local expertise, and be backed up with support at the state level. Thus, financial and technical support for environmental education, policy development, and environmental NGOs is perhaps most crucial for long term environmental awareness and protection. Monitoring and re-evaluation will also be important steps in ensuring that assistance is well spent and that desired aims are achieved rather than exacerbating existing problems. There needs to be some integration and communication to avoid investment in one sphere counteracting any benefits from another. And, most importantly, international assistance should aim to foster local capacities so as to avoid long term reliance on its provision.

Chapter 7: Political and Legal Reform and the Environment

7.1 Introduction

As the preceding chapters show, the Soviet system had social, economic, and environmental impacts that will take some time to reverse. The resource-intensiveness of the Soviet system, the Marxist ideology of growth at the expense of nature, and the antiquated machinery used in production have all been discussed as elements of the environmental crisis in the post-communist region. Equally important were the political features of the system of central planning and management (Nørgaard and Pedersen 1994). As with economic reform, political and legal reform involved extensive changes and institutional development over a short period of time, unlike other democratic societies where such change occurred over centuries. This chapter reviews the political and legal changes made since 1990 in respect to the environment. In doing so, it discusses the possibilities of democratic reform, particularly the issue of public participation, which is considered crucial to an environmentally sustainable society. Although necessary preconditions for successful environmental protection, democratic and institutional reform in themselves will not be sufficient (Eckerberg and Pedersen 1997) (see also 7.2.1).

The Soviet economic system was inefficient in that the associated administrative culture that developed had a deleterious affect on the very functions that an economy should perform. The secrecy, institutionalised nepotism, or "nomenklatura", and a desire to meet production targets at all costs led to a poor quality of information, uninformed decision-making, and distorted evaluations. It was also very resource-intensive. Thus, the environmental problems are clearly related to the pattern of development rather than any natural phenomena (Kabala 1993:49-58). This raises the question of whether it was necessary to completely overturn and reconstruct the political system or whether economic measures could have been implemented in order to eradicate inefficiencies and take more account of environmental impacts. Duncan Fisher (1994) provides an answer:

> Experience worldwide has shown ... that the main determinant of the balance between conflicting economic, social and environmental considerations in development is the country's overall political and institutional framework.

> The socialist countries were no exception; both their politics and their administrative structures were heavily geared towards economic growth, with little consideration of social and environmental issues, both of which were weakly represented in politics (Fisher for EBRD 1994:xi).

Social and environmental activists throughout FSU and CEE called for political reconstruction as the fundamental facet of any social or environmental reform. Besides, as discussed in 5.4.5, the economic reforms under Stalin and Gorbachev failed to fundamentally change conditions relating to basic freedoms and expression. Further, as noted in Chapter 4, pollution became a topic for public opposition to Soviet policies in all spheres of society and a platform for political change. The perceived solution to environmental problems was 'not specific governmental regulatory policy, but rather fundamental transformation of the country's political system' (Kabala 1993:50).

Drewnowski pointed out that the suppression of "truth" or information - an element of degradation that stems from the notion that Marxist doctrine is right and will prevail over other ideologies - led to a reluctance to impart necessary information and, thereby, seriously affected the quality of decision-making that had to take place in any case (in Kabala 1993:57). Further, the elimination of avenues for dissent 'limits the range of meaningful discussion and destroys the very capacity for self-correction to which socialism has for so long ascribed its theoretical superiority over market systems' (Kabala 1993:57). The capacity for self-evaluation and correction is an essential part of democratic systems. Dryzek (1992:47-8), for example, refers to the necessity for 'negative feedback' mechanisms which counteract deviations, thereby minimising shortfalls in the system.

Given the fundamental and inherent problems such as those described above (which rendered the Soviet economic system incompetent) the usual economic reform package was irrelevant. Drewnowski attested that solutions would not be found in introducing material incentives or a measure of decentralisation, nor in modifying planning principles. Rather, he insisted, an effective remedy rested only with the restoration of basic human freedoms and democratic rights (in Kabala 1993:58). Section 7.2.3 demonstrates that some of these undemocratic features remain in Lithuania and act as a hindrance to the rebuilding of democracy and the development of a new political culture. Further, as discussed in 7.2.2.3 and 7.4.1.3, there are only limited avenues for public participation in the decision-making process or

in scrutinising the implementation of environmental policy. The international community is an influential group in the formulating of policy in Lithuania. Section 7.3 discusses the proposed inclusion of Lithuania into the European Union along with other international obligations which affect environmental policy. Section 7.4 highlights the way in which environmental concerns have been activated in the Lithuanian political arena and the various legal instruments that have been used to address such concerns are reviewed.

7.2 **Post-Independence**

Kabala argues that earlier policy changes in environmental and economic spheres in Poland were not dissimilar to the reform package of the current transition to a market economy. 'The critical difference is the wholesale change of the political background, which was the crucial variable all along' (Kabala 1993:61). This thesis has provided evidence of the impact which Soviet annexation had on the Lithuanian environment and, thus, the importance of political reform. However, it should be noted that some of the earlier political attitudes and methods of decision-making remain in Lithuania and, combined with a renewed desire for economic growth, have continued to have a detrimental effect, becoming an obstacle to environmental rehabilitation and protection. However, environmental reform has occurred and legislation is currently being amended or drafted to deal with specific environmental issues. As with the transition to a market economy, political reform has not been a panacea for environmental problems, not least of all because 'people want *any* style of political organisation that will generate economic prosperity' (Gibson 1996:401).

Governance in Lithuania has been circular (not unlike other democratic countries as voters attempt some sort of recourse for various problems in society only to find that either the same or new problems occur under the previous opposition) with the post-*Sajudis* camp (Homeland Union) reclaiming control of the parliament at the national elections in October, 1996. This has provided an opportunity for observers to note differences in policy development and approaches to reform. In terms of the environment, there is essentially little difference between Lithuanian Democratic Labour Party (LDDP) and the Homeland Union coalition. An environmental strategy (see 7.4.2), a Public Investment Programme with a reasonable allocation for environmental protection, and various environment-related laws have been prepared under the LDDP Government. Whether the new conservative

government continues with these commitments remains to be seen but it is almost certain that the efforts will not be improved upon as the Homeland Union will continue to develop liberal market policies (see Chapter 5).

7.2.1 Politics, Economy, and Environment

The links between the economy and the environment are outlined in Chapter 5. The way in which economic activity impinges on the environment (and the way in which degradation has implications for the economy) has been fundamental to this thesis. The political context in which economic decisions are made is also an important factor to be considered. It has been argued that, in Lithuania, politics has had the most influence on the environment (see Banks 1991:7-9). Having accepted the pivotal role that political change played in addressing economic, social, and environmental problems in Lithuania and the rest of the post-communist region, an evaluation of the main facets of this change will now be presented. The process of democratisation, along with the transition to a market economy, have been heralded as the panacea for environmental problems in the region. However, the process of change has, itself, caused various environmental problems. Meanwhile, economic concerns have secured dominance on the political agenda. Green political theory, borrowing from liberalism, has subscribed to a democratic principle of government by consent; a decentralist, participatory form of society (Dobson 1990:25). While rebuilding democracy and a political culture is essential for environmental protection by improving public participation and the influence of various environmental interest groups, it does not guarantee ecological sustainability. The pluralist political system advocated by Green political theory is both friend and foe of the notion of an environmentally sustainable society (see also 7.4). As Nørgaard and Pedersen (1994:102) point out,

> it is far from obvious that transition will produce an environment receptive to soft political issues such as environmental protection. Hence, the transition to market economy and liberal democracy does not automatically increase the salience of environmentally issues on the political agenda of post-communist societies. The extent to which environmental problems will be addressed by the new regimes will be defined in the political arena of the new states.

This thesis has shown that the salience of environmental issues has not increased with reform and that the governments of Lithuania have not given the environment a high priority. Despite issues of national identity or economics, a commitment (or lack thereof) to environmental protection

is essentially politically motivated. Decisions, such as the construction of an oil terminal on the Baltic coast (see 2.3.1) and the continuance of nuclear power (see 2.4.3), are fundamentally political, albeit disguised as economic or technical decisions. Furthermore, decisions are made in an atmosphere of corruption and political and administrative uncertainty by those with a protective attitude toward information and with little regard for the environment or public involvement. Gorz (1980) noted the tendency of government and bureaucracy to hide behind the technical complexity of issues such as nuclear power, designating it the exclusive domain of scientists. In this way, public dissent is, more easily, disregarded as uninformed. He asserts that 'from the very beginning the nuclear option has been described as incompatible with democracy' (Gorz 1980:100).

The oil terminal was not a question of economics as argued by the Government. In fact, according to energy experts interviewed by the author, the construction of a terminal and the upgrading of Mazeikiai refinery were clearly economically inefficient. The primary motivation for such a decision was to facilitate trade from countries other than Russia. Construction was eventually halted due to a lack of finance and, in particular, an inability to attract investors but support for its completion remains (see 2.3.1). In addition, rumours of corruption suggest that such decisions lead to the financial gain of a few (see also 7.2.1.3). Claims that nuclear power is necessary to avoid reliance on Russian oil, the supply of which cannot be guaranteed, do not correspond with the parallel decision to obtain oil from elsewhere. Public concern is allayed with arguments of economic independence and by the fuelling of their fears of Russian dominance.

These examples show that political climate is a major factor in environmental decisions and the fate of environmental policy in Lithuania. Political decisions on the environment (or in other areas with an environmental impact) can be made in direct contradiction to policy or stated commitments, the only recourse being democratic elections at which time it may be too late to reverse any impacts. The subsequent sections present an overview of the political climate in Lithuania following the restoration of independence, providing a context in which decisions have been made and in which legislation has been developed.

7.2.1.1 Party Formation: Finding a Niche

The elections to the Congress of Peoples' Deputies in March 1989 were, for *Sajudis*, the first opportunity to challenge the establishment at which they managed to obtain 36 out of the 42 Lithuanian seats. The elections to the Lithuanian Supreme Soviet in February of the following year signalled that Lithuania had begun the process of democracy with the formation of a multi-party system. Since that time, many political parties have been developing, reformulating, and disbanding as they find their place in the new political system. Despite the formation of around 30 political parties, the political system has been generally bipolar in nature. It has tended to reflect the individual politicians' perception of history (namely of the Smetona era and the Soviet annexation) and has largely resulted in a communists verses anti-communists competition, however this does not amount to a Western Left-Right division (Viesulas 1993:11 and Lieven 1993:215-6).

The national elections have reflected this "us and them" tendency with the popular *Sajudis* victory in 1990, followed by a more disgruntled support of LDDP in 1992, and a return to the post-*Sajudis* camp in 1996. Although differing ideologically, there has been very little difference in policy programmes. Early programmes were inspired by a rejection of the past rather than a coherent vision of the future (Viesulas 1993:14). Parties were, then, not formed on the basis of sociopolitical cleavages as in the West but on the evaluation of history as well as the tacit influence of Western ideas on the party elites. Politicians and journalists have used Western political models to describe party alignment which do not suit the contextual framework in which the parties have been created and within which they continue to function (Lieven 1993:214). They were formed from the top down and thus have no tangible links with any particular social group. The result has been 'a widening gap between the world of politics and the world of everyday life' (Viesulas 1993:19) (see also 7.2.3).

Owing to the political monopoly held by the Communist Party in the past, there was initially little trust placed in political parties. For example, at the 1990 elections, more than 50 per cent of the newly elected parliamentarians had expressed no party affiliation (Viesulas 1993:13). Many that did, also ran under the security of the *Sajudis* umbrella (given that the "pro-independence" aim was common to all), highlighting the eventual bipolar tendency. This continued for the 1992 elections, despite the formation of more parties. It

was a competition of *Sajudis*-led Government verses the Communist opposition in which the latter reclaimed power.

For many parties, identifying and expressing their ideological differences from other parties and finding a niche which they can fill has been problematic. Not least of all because of the tendency to use current popular Western terminology to describe their leanings which have conflicted with the terminology of the past. Chapter 4 discussed the ambiguous nature of the term 'nationalist' and the evolution that has taken place in Lithuania such that it is now a reasonably acceptable label. Other conflicts include the term 'conservative' which was previously used to describe the Communist die-hards but which has a completely opposite meaning in the West. Likewise, 'radical' and 'radicalism' tend to be attributed to socialist groups in the West while, in the Soviet system, *Sajudis* and the Lithuanian Freedom League were the radicals. The Greens too struggled with identity. In the West the label Green (particularly Dark Green) is associated with an ideological package which has also tended to be left in its orientation because of its focus on the minority interests in society, such as ethnic communities, women, and the environment, as a priority over economic progress. For the Green party of Lithuania, which had already split from the Green Movement over ideological and practical differences, the left orientation was not only a possible barrier to electoral success but also contradicted, to some extent, with their own values of national sovereignty and patriotism (see also 4.3.1).[1]

During 1990-1992, while promoting the usual conservative values of private property, such as the demonopolisation of industry and decollectivisation of farms, the Right (post-*Sajudis*, Homeland Union camp) have also upheld non-*laisse faire* interventionist controls on private enterprises. This could be more to do with limiting the influence of the former Communist elites who had retained property and capital following the elimination of the one party system (Viesulas 1993:16). Others have pointed to the more conservative aspects of the 1992-1996 Brazauskas era which have promoted a "wild capitalism" and the left-wing orientation of some of the Homeland Union's economic policies (Zydowicz, K., BALT-L internet posting; no. 6992, December 1996). Zydowicz argues that the Liberal Union is the only true free-market party while the rest of the "Right" have a mixture of socialist ideas as to the running of the economy and right-wing ideological leanings in terms of values such as religion, tradition, nationhood, and the family. This might

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1. Or perhaps these contradictions come only from the perspective of a Western observer.

explain the similar programmes of most political parties in Lithuania, despite varying ideological "tags". However, even staunch capitalists have begun to warn of the social and economic implications of the free market system and perhaps the political situation in Lithuania is such that all parties can not ignore the welfare of its citizens. Welfare orientated platforms could be a result of the "communal" notions of the Soviet philosophy and a familiarity with the welfare system that has become entrenched in society but it would be to Lithuania's advantage in the longer-term if most political parties continued to include such "left" ideas in their platforms. Yet, as noted by Viesulas (1996:16) in the *Sajudis* case, their "left" policies of government intervention are driven by a desire to rid Lithuania of communist influence. In their efforts to do so, argues Viesulas (1996:17), they were prepared to implement 'undemocratic means' (see also 7.2.2).

Perhaps, ultimately, it is not useful to use "labels" to describe Lithuanian parties since they tend to assume a complex package of values and priorities based on perceptions of specific historical events and of future orientations. Viesulas (1996:17-18) has pointed out that [at least initially] 'all Lithuanian parties lack[ed] the internal ideological or policy coherence which would give them some content beyond the "designer" labels which they wear'.

7.2.1.2 Ex-Communist Victory

Much of the detail of the *Sajudis* victory in 1990, led by Landsbergis, has been covered in Chapter 4. This chapter focuses on the events following the restoration of independence beginning with the return to power in 1992 of Algirdas Brazauskas, leader of the Lithuanian Democratic Labour Party, a restructured version of the Communist Party of Lithuania. The restructured communist party was a common feature of political reform in the FSU and CEE. The parties pledged themselves to a plural parliamentary democracy, a mixed market economy, and Western democratic principles. They also, to varying degrees, renounced the authoritarianism of the past. Many of these parties were not dissimilar in political leanings to socialist or social democratic parties of the West. However, to many in those countries, including Lithuania, the past could not be forgiven by a change in name (Mason 1992:70). Consequently, LDDP's astounding victory at the 1992 national elections shocked *Sajudis* supporters, academics, and Lithuanian emigrés.

The establishment of a democratic political system (including the electoral

system) was a difficult and much-debated task. The end result was a mixture of proportional and majority rule voting based on a variety of Western models. Thus, the new Lithuanian electoral system is made up of two rounds. The first involves a vote for a party and seats are awarded *pro rata* to party list candidates based on the total number of votes received. In the second round, constituents vote for single members representing a district where a candidate must receive more than 50 per cent of the vote. Run-off elections are necessary when no candidate has managed to secure the majority vote. Because LDDP received so many votes in the first round (42.6%), as well as a similar percentage of the second round votes, they were eligible for 74 seats but only 71 candidates ran on the LDDP ticket.

Unlike the elections in 1990, there were no public announcements of environmental policies by any party other than the Greens. Some parties did, however, include environmental issues in their statutes, yet it was clear that the environment was not seen as a "vote-winning' issue. The Green Party, who had two seats in parliament, failed to retain their seats, indicating the general demise of interest in environmental issues. The elections were held at one of the lowest points for the Lithuanian economy. Goods and services were still scarce, relations with Russia were extremely tense causing concern over the reliability of oil and gas supplies, wages were low, inflation had reached 1160 per cent, and a national exchangeable currency was yet to be re-introduced (see also 5.4.3.1). As discussed in Chapter 4, such circumstances contributed to the falling of environmental issues from the agenda. But there are also the arguments regarding the influence of the dissolution of the reform movements and the role of national sentiment in reducing involvement in environmental protest (see 4.3.4.1). Could one expect that, as conditions improve, environmental issues will (as a post-materialist concern) return to a position of importance on the political agenda?

The inflation rate had decreased to 36% in 1995 yet environmental issues were still absent from political campaigns in 1996 with only a few parties mentioning the environment in their party manifestos. The Green Party did not even participate. Although the situation is still very difficult for many Lithuanians, a comeback for environmental issues could have been expected. That is if the premise that economic hardship was the principle cause for the decline is accepted. This thesis demonstrates that there have been many more influencing factors other than economic adversity which have contributed to such a decline. Chapter 4 highlights some of the other

issues involved while Chapter 5 argues that economic concerns are closely related to environmental problems and that ignoring the latter does not necessarily lead to the improvement of the former. Chapter 6 indicates the relatively low levels of support for environmental rehabilitation and protection and the problems Lithuania faces by using only fiscal measures for generating environmental funding. The Homeland Union Government of 1996 plans to reduce inflation to 7 per cent and claims that average salaries will double by 1999 (*OMRI Daily Digest*, no. 249, December 12 1996). Should an increase in the salience of environmental issues thus be expected by this time? Clearly, there are other factors at play, including other policy decisions which conflict with any notion of environmental protection. Further, by expressing their plans to reduce inflation as the first goal of their 1997-2000 government programme on being sworn into office, the Conservative Coalition has demonstrated its economic focus which has been shown to have serious environmental implications (see also 5.2, 5.2.2 and 7.2.1.4).

Economic adversity, therefore, can not be regarded as the major reason for the waning of environmental issues. It has, however, been touted as a principle reason for LDDP's victory. Citizens (particularly in the northern rural areas where LDDP were most successful) were disappointed with the economic situation independence had afforded them, a situation that had generally been worsened by the change. LDDP were seen as experienced politicians and administrators and, therefore, more likely to alleviate the situation. They were also expected, by some, to be more successful in negotiating with Russia over oil and gas supplies. The perception of LDDP, and Brazauskas in particular, as politically experienced was not the sole contributor their electoral victory. Practical expertise was also an important feature in their campaigning techniques. This was something the post-*Sajudis* camp developed while in opposition and which played a significant role in their 1996 success.

Perhaps the most important task of new post-communist governments was the design and implementation of new constitutions (Mason 1992:70). In Lithuania, drafts of the constitution were debated for 2 years. The final draft was accepted by a referendum held on the same day as the national election. Earlier, in May 1992, a referendum on the establishment of a presidential system was unsuccessful. The 'no' vote was attributed to a fear of authoritarianism (Grineviciute 1992:1). Yet, the new constitution on which Lithuanians were to vote, established the office of President and the powers

allocated to that position. Despite support for a parliamentary system (which was evidenced in the earlier referendum), the Homeland Union-Landsbergis Government had incorporated the position of President into the constitution. There was a lot of anxiety about the lack of a constitution and the public were ready to accept what was put before them. Thus, the presidential system was established. Ironically, Chairman Landsbergis did not have the opportunity to fill the position. The return of a Landsbergis-led government at the 1996 elections and the likelihood of his success in the Presidential elections of 1997 are discussed in 7.2.1.4.

7.2.1.3 Corruption

Corruption under communism became a way of life and the danger of it becoming endemic in the state and society is probably the most serious problem faced by the Baltic countries[2]. Some believe it will only subside with new generations, leading to calls for a 'moral regeneration of the nation' (Lieven 1993:318). In Estonia, the Right wing politicians that formed government in 1992 have an apparent honesty and dedication which stems from their strong sense of nationalism. Such a connection is less apparent in Lithuania where 'there is often a very catholic gap between the rhetoric of high ideals and the actual practice of government' (Lieven 1993:318).

Since the restoration of independence, the political environment has continued to be characterised by 'bitter polemics' and corrupt decisions (Girnius 1995:56). In particular, during the reign of LDDP, the opposition sought to exploit the declining popularity of the government, often emphasising corruption. Whilst some of the allegations may have been more about fuelling the decline in LDDP's reputation and thereby improving their own, there is some evidence at least that corruption has pervaded government and the bureaucracy. Businesses have acknowledged the payment of bribes to officials (see 7.2.3), and Ministers have been shown to have used 'insider' information to avoid financial loss. For example, in the most famous and influential case, the Prime Minister, Adolfas Slezevicius and Romasis Vaitekunas, the Minister of Internal Affairs withdrew personal deposits from the faltering Lithuanian Joint Stock Innovation Bank after the decision had been made to suspend the bank's activities, two days before it had been publicly announced or implemented. In addition, it was revealed

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[2] For a comprehensive analysis of corruption trends in communist systems, see Holmes (1993).

that the men received nearly twice the usual interest on their deposits (Girnius 1995:57). Despite calls for the resignation of Slezevicius and two unaccepted protest resignations from other members, Brazauskas initially allowed both Vaitekunas and Slezevicius to remain in government. On January 24, 1996, Brazauskas asked Slezevicius to resign, however the LDDP council overwhelmingly supported Slezevicius in not accepting the President's advice. Eventually, on February 8, 1996, the Parliament voted in favour (89 to 3 with 11 abstentions) to remove the Prime Minister from his office (*OMRI Daily Digest*, nos. 5, 18, 19, and 20 on January 8, 25, 26, and 29 1996). Commentators believed this clearly signalled a victory for the Conservatives in the upcoming national election. Prior to this incident, another member of parliament, Romualdas Ozolas from the Centre Union, openly accused Slezevicius of corruption and stated that he had enough evidence to place the Prime Minister under arrest. Although such evidence was never produced, the popularity of Ozolas soared while that of the Prime Minister plummeted (Girnius 1995:57), highlighting both the public's concern regarding corruption as well as a measure of political naivety.

The increasing crime rates, particularly in organised crime, have also been a major concern in Lithuanian society and may have depended on some sort of government sanctioning, albeit not openly. Violence, murder, and bombings of businesses have become a common occurrence. The network of organised crime is often referred to as the 'Mafia'. While these rings are involved in large-scale smuggling, theft of state property (particularly through the privatization process) as well as protection, extortion, and prostitution rackets, there internal structures are not similar to the Sicilian Mafia (Lieven 1993:346). Physical attacks on the media have also been frequent and are particularly relevant here as they represent attacks on freedom of expression, a cornerstone of democracy. A Lithuanian journalist with *Respublika*, Vitas Lingys, was shot and killed in 1993 following revealing stories on a particular organised crime gang in Vilnius. The leader of the gang, Boris Dekanidze (the same man at the centre of sabotage threats at Ignalina NPP) was convicted of pre-meditated murder and sentenced to death in November, 1994 and executed in July 1995. The execution, Lithuania's seventh since the restoration of independence, was condemned by Amnesty International but Government spokesman, Vilius Kavaliauskas, responded that while capital punishment was not exemplary of good democracy, its abolition was not on the government's agenda. The President later pointed out that the death sentence was incompatible with the European Convention on Human Rights which

Lithuania would need to sign for acceptance into the EU. A moratorium was placed on the death penalty but there have been renewed calls from the Homeland Union Government to re-instigate it (Girnius 1995: 59-60 and *OMRI Daily Digest*, no. 138 July 18 1995).

In November 1995, the bombing of the offices of *Lietuvos Rytas*, one of the major Lithuanian dailies, was condemned by all political parties. It was suspected that the attack was sparked by a series of crime exposés printed in the newspaper. Although the Government offered a USD 25 000 reward for information leading to a conviction of those responsible, the media attacked them, through the Free Speech Foundation (FSF), for directly fostering an intolerant and hostile attitude toward the media. The FSF was set up in October, 1995 by the directors of the major mass media outlets to fight what they considered were threats to free speech and free enterprise (Girnius 1995:59 and OMRI Daily Digest no. 226; November 20 1995). They declared that Lithuania was 'only one step away from the water-shed dividing democracy from dictatorship' (cited in Girnius 1995:59).

The new "Right-wing" government has also been accused of corruption. Prime Minister Gediminas Vagnorius, in particular has been accused of having links with Vladas Laurinavicius, a millionaire of dubious reputation. Newspaper reports allege that the millionaire financially supported the Homeland Union, although Vagnorius vehemently denies the allegations (*OMRI Daily Digest*, no. 54; March 18 1997).

Other incidents have included border officials involved in smuggling and bribery. Aside from the larger, politically significant bribes, there is a culture of smaller bribes in varying forms that pervades Lithuanian society. A legacy of the Soviet system whereby bribes ensured the availability of certain goods or bureaucratic action, bribery continues amongst the fledgling administrative structures. Bribes are still used to avoid police fines, to enter university, and to get licences, papers, passports and the like more quickly.

7.2.1.4 Elections 1996

Twenty eight parties comprising 1 400 candidates and an additional 30 independent candidates competed for 141 parliamentary seats in the elections, held on October 20, 1996 (*OMRI Daily Digest*, no. 180; September 17 1996). The *Sajudis*-derived Homeland Union won 70 seats in the parliament with

their nearest rival, the Christian Democrats, gaining 16 seats. LDDP only managed to retain 12 of their 71 seats. Vytautas Landsbergis (Leader of the Homeland Union and likely President of Lithuania) and Gediminas Vagnorius (who became Prime minister) were the only candidates to get more than 50 per cent of the constituent vote. The two top candidates in the remaining 65 districts, where no one gained a majority, competed in runoff elections on 10 November. The Homeland Union did not have a majority in the parliament but formed government with support from the Christian Democrats. The new Government was sworn in on December 4 by President Algirdas Brazauskas. The Cabinet is comprised of eleven Homeland Union ministers, three Christian Democrat ministers, two Centre Union ministers, and one from the Confederation of Industrialists. Four ministers are not members of the parliament (*OMRI Daily Digest*, no. 234; December 5 1996). Other parties now represented in the parliament are; Centre Union (13), Social Democratic Party (12), Democratic Labour Party (12), Democratic Party of Lithuania (2), Lithuania Farmers Party (1), Liberal Union (1), Christian Democrat Union (1), Women's Party (1), Lithuanian National Union (1), Young Lithuania Nationalists (1), Poles Electoral Action (1), Union of Political Prisoners and Deportees (1), Independents (4), Undecided (4) (Lithuanian Electoral Commission internet site).

A notable omission from the 29-strong party list was the Green Party. Primarily a reflection of unresolved conflicts within the party, no Green candidates stood for parliament. While this helps to explain why environmental issues were not a dominant feature of the election campaigns (because there was not a formal party voicing environmental concerns and stimulating debate), it also highlights the way in which individual personalities are influential in promoting environmentalism. Without strong leadership and a public appearance of cohesiveness, the party is unlikely to gain popular support. Further, the failure to stand may have been that party members were unhopeful of success or perhaps they were unable to generate the minimum number of signatures supporting registration.

Environmental issues had some representation by inclusion in the election programmes of other parties. The Liberal Union, for example, mentioned environmental protection in their platform, namely the need to avoid a contradiction between economic growth and environmental protection with an emphasis on the "polluter pays" principle. However, their principle economic aim is for the state to create conditions for the functioning of the

free market. This has been shown to have serious implications for environmental protection and social justice (see 5.2.1 and 5.4.4.1). The Homeland Union (holding the most seats) did not refer to environmental issues at all, while their ally in parliament, the Christian Democrats do refer to a policy on the natural environment. Neither the Lithuanian Democrats, Party of Economy, LDDP, Lithuanian Freedom Union, nor the Lithuanian Social Democratic Party referred to environmental protection. The Women's Party and the Centre Union did include statements on environmental issues. The programme of the former stressed that humans are an integral part of nature, thereby requiring the careful use of resources, an open approach to public information on environmental hazards, a priority for ecologically safe production and agriculture. The Centre Union, then, is the only party currently in the parliament which includes environmental protection in its election programme albeit thirteenth out of fifteen priority areas (Department of Administration, Kaunas Technical University internet site).

The Municipal elections held in March 1995, were closely watched as an indicator of the national elections which followed about 18 months later. The right-of-centre parties were obvious victors with the Homeland Union securing 29 per cent of the votes, LDDP gaining 20 per cent and the Christian Democrats obtaining 17 per cent (Girnius 1995:58). The latter's vote indicated that they had become the third major party in Lithuania and a clear rival in the 1996 national elections. Interestingly, the elections were marked by apathy with less than half (43%) of eligible voters participating. Similarly, the national elections in 1996 showed a decline in voter participation relative to the 1992 elections. It was expected that the participation rate would be around 66 per cent but only 53 per cent of eligible voters took part (pers. comm. Algis Krupavicius and Department of Administration, Kaunas Technical University, internet site). Seats in four electorates remain undecided (as at February 1997) as voter turn-out was below the 40 per cent minimum with re-runs required within six months of the election (OMRI Daily Digest, no. 206; 23 October 1996). It has been argued that the Conservatives' win in 1996 was actually facilitated by the poor turnout with the difference in LDDP votes being similar in number to the decline in turn-out which could be attributed to LDDP voters lack of participation (Krzysztof Zydowicz, BALT-L internet posting; no. 6992, December 1996). Likewise, the turnout at the Municipal elections might have favoured the Conservative win.

After the 1995 Municipal elections, the various right-wing coalitions took

control in almost all regional and municipal governments. Understandably, tension between the local and national governments increased. In fact, the local governments claimed that the LDDP Government was thwarting the administering of local areas by not honouring financial commitments and by establishing the non-elective office of Regional Governor which had subsumed many of the rights and responsibilities of municipal officers. In response, representatives from 53 of the 56 municipalities formed the Association of Lithuanian Municipalities which complained to the Council of Europe that local government responsibilities were being curtailed (Girnius 1995:58). The tension between the levels of government clearly had a role in the Conservative victory in the elections of October, 1996.

7.2.2 Rebuilding a Democracy

In the fight for independence, the Lithuanian Reform Movement focused a lot on the independence years of 1918-39, modelling their symbolism, ideologies, parties, and state institutions on those of that era (Lieven 1993:55). Many, deflecting criticism of the Smetona era, refer to the democratic parliamentary constitution of 1922. One of the problems with this constitution, it has been argued, 'is that it was too democratic for its own good' (Lieven 1993:64). Parliamentary control was such that it was capable of forming the government and accepting its resignation. The constitution, based on the Estonian model, was egalitarian and parliaments were elected by universal suffrage and full proportional representation (Lieven 1993:64-5). It is these elements that, ironically, led to the demise of democratic pluralism and the introduction of authoritarianism (see 4.2.2.2 and 4.2.2.4).

The more recent democratic changes began under Gorbachev with the introduction of *glasnost* and *perestroika,* when the public were actively encouraged to voice opinions through media or politicians. But it was the resistance to the coup of 1991 which signified a commitment to democratic values on the part of the people across the Soviet Union and facilitated the secession of several republics, including Russia. The path to democracy in the region was bolstered by this relatively peaceful demise of the Soviet Union. Fukuyama has noted that the 'willing retreat' of those in power, although often stimulated by a crisis, was an acknowledgement of the growing understanding that 'democracy is the only legitimate source of authority in the modern world' (in Giddens 1994:106). Although Gorbachev did not foresee the complete devolution of power from the centre to the republics,

the emancipation of the republics was a crucial step in democratisation developing from below (Karklins 1994:xviii) (see also 4.3). Rigby (1992:21) argues that the movement toward democracy would not have gone so quickly or so far (if at all) had it not been for the existing elements of civil society. These elements include the democratic structures which were symbolic in nature only and the development of various groups forming a 'shadow culture' which could come to the fore once the coercive controls of the regime were relaxed (Rigby 1992:21-2).

Whilst *Sajudis* was unquestionably important in the restoration of Lithuanian independence and the establishment of democratic principles, the preparedness of the Landsbergis Government to promote non-democratic behaviour is a set back for the rebuilding of democracy. The most significant charge against Landsbergis (amongst many criticisms) is that 'he left the nation more divided than when he became its leader, and Lithuanian democracy badly scarred' (Lieven 1993:274).

It is not the purpose of this section to critically analyse theories of democracy nor to discuss the aspects of modern society which may or may not be democratic. For instance, the formal equality assigned to citizens in a democratic society only partially ameliorates the economic inequality which has become a recognised cost of market capitalism. It is now questionable whether such formal rights will continue to compensate for the economic disparity (Somers 1993:587-588). Thus, there have been calls for an extension of democratic theory to include social and economic domains (Gould 1988:80-90). Others, such as Giddens (1994:116), have argued for the continued separation of political life from other aspects to avoid the tendency for government to become an autocracy as in the case of the Soviet Union. Interesting and more detailed analyses, including the limits of conventional liberal democracy, can be found in the works of David Held (1992, 1993), Anthony Giddens (1994), Christopher Pierson (1993), Chantal Mouffe (1992), David Beetham (1992), and Carol Gould (1988).

For the purposes of this thesis, it is assumed that democracy is a good thing for society, that it is generally attainable, and that it is an important factor in obtaining accountability for decisions which affect the economic and environmental well-being of citizens. It is also assumed that democracy entails a pluralist society hinging on public participation, parliamentary process, the separation of powers, and the rule of law, offering rights and the

protection of those rights to all from others, including the state. In relation to reform in Lithuania and the post-communist region, democracy is considered to be a fundamental aspect of reform in all spheres of society but in no sense is it guaranteed. It is seen an essential prerequisite for a modern environmentally sustainable society yet it does not, necessarily, lead to such developments.

The discussion here will focus on the prospects for democracy in the region and the perceptions of democracy held by citizens. The particular features of democracy which are important to environmental sustainability are the right to free elections, to free assembly, to protest and petition, to access information, to form a political party, and participate in environmental decision-making. Facilitation of such involvement for concerned citizens is an indication of the government's willingness to accommodate political expression of environmental concerns. Therefore, an evaluation of democratic processes in Lithuania will act as a test to the hypothesis that environmental concern in general and government commitment to environmental rehabilitation and protection in particular will decline following the initial excitement of restoring independence since such perceptions and processes have the capacity to promote an environmentally progressive society.

Focusing on 3 out of the 5 major indicators, surveys have revealed that democratic values, in general, are more prevalent in Lithuania than in Russia and the Ukraine (Reisinger *et al.* 1994:211). Is this a permanent feature of Lithuanian society or could it come unstuck under increasing economic pressure? As noted by Ruperez (1994:ii), 'democracy is a set of values that has to be acquired and nurtured'.

The political dominance of the Communist Party along with the well documented accounts of suppression of internationally accepted citizenship rights is a legacy which some theorists believe too strong for democracy to take hold in the longer term. But, according to Reisinger *et al.* (1995:942), no one has made a strong empirical case that communist rule left citizens with attitudes unfavourable to democratisation. Arguing on the basis of surveys conducted pre and post communist rule, they identify democratic values in the community which offer a more optimistic conclusion. For example, Reisinger *et al.* (1994 and 1995) and Gibson (1996) have argued, contra common assumptions, that considerable democratic attitudes amongst members of Soviet society have formed a solid basis for developments since independence.

The historical context still has a significant role in the way democracy is perceived and formulated. This is discussed in 7.2.2.1 below. Further, there are problems associated with the rebuilding of democracy which are discussed in 7.2.3 following a more detailed account of the results of social surveys in the region and the similarities and differences in perceptions amongst those living in Russia, Ukraine, and Lithuania. The question is 'Can a people make democracy work when they have grown up in a polity that forced and directed certain kinds of behaviours while prohibiting many others commonly found in democracies?' (Reisinger *et al.* 1995:942).

Reisinger *et al.* (1994:184) point to three assumptions which act as starting points in answering such questions. There are those who believe that *historical* development is most influential in the establishment of democratic values in society and, therefore, one should find a Russian political culture, a Lithuanian political culture and so on. Others focus more on the similarities of the development of social and political traditions in the Soviet region. A second group argue that *indoctrination* of Marxist-Leninist values shaped all those living in Soviet societies. Industrialisation, urbanisation, and education under the Soviet regime has been the focus of a third group. Since such processes of *modernisation* have elsewhere shaped political attitudes, they should also play a significant role within Soviet societies. The first two assumptions tend to lead to pessimistic forecasts for democracy in the region. Those concluding that modernisation has been most influential expect to find values supportive of democracy within such societies.

The conclusions of Reisinger *et al.* (1994 and 1995) and Gibson (1996) suggest that, for the moment at least, there is reason to be optimistic regarding stable democracy in those countries. But perhaps it is too early to know whether the data more accurately reflects fashionable and ephemeral views expounded in the early stages of reform. Gibson (1996:397) acknowledges that many writers fear that such shallow support for democracy is unlikely to withstand the political and economic pressures over time. International pressure may be one mechanism for ensuring democratic reform is more extensive than establishing a multi-party political system in which free election of representatives is a central part. As discussed in Chapter 6, much international assistance is predicated on political and economic reform. A major focus of this has been democratic processes. It might be argued that democracy should be a precondition for other reforms yet it does still play a secondary role in most aid programmes. For example, 'while economic restructuring is the

primary aim of PHARE, a secondary aim is to promote democracy' (WWF UK 1994:12). Part of PHARE's aim to promote 'civic society' has involved the support of NGOs which is crucial not only because of their role in promoting environmental protection issues but for democratic reform by assisting such bodies to participate in the political process (see also 6.2.3.2).

If democracy is secured in Lithuania there are still other possible threats to its retention. Lieven (1993:71) has argued that democracy was strong in the Baltics during 1990-1993 because it was equated with economic prosperity which everyone was seeking. He further argues that the hegemony of democratic principles in contemporary Europe added strength to Baltic democracy, reinforced by the attraction of EU economic power and Western lifestyles (Lieven 1993:71). The Norwegian Society for the Conservation of Nature (1994:4-5), on the other hand, expressed concern that democratic principles of closeness, openness, and public participation are actually compromised by EU membership. They argue that decision-makers are geographically, culturally, and linguistically removed from the citizens of most countries which hinders participation. Further, there are no laws securing involvement or information regarding decision-making giving little control to people over what their representatives' say on their behalf. It is also argued that national decisions are no longer based on democratic principles. In Denmark, for example, 3200 of the 3493 laws and regulations passed in 1991 came directly or indirectly from the EU with the remainder originating from the Danish Parliament. Decisions at the national level usually involve public debate, in the press, public hearings, rallies. However, in the EU, there is no common ground for decision-making; there is no common language, no common newspapers, and very few common organisations. Co-ordinating cooperation among concerned environmental groups for lobbying is, therefore, very difficult. Traditional democratic concepts such as responsibility and accountability are also more difficult to procure in large, non-state based political systems.

7.2.2.1 Historical Context

Whatever their original good intentions, the Russian and Soviet belief in the primacy of the community over the individual, of collective good over individual rights (along with other efforts to abolish such liberal notions in the name of a more perfect democracy) succeeded only in 'cutting the democratic ground from under their feet' (Beetham 1992:42). Rigby (1992:17)

points out that democracy originally formed a genuine element of the Bolshevik tradition but the transformation into mono-organisational socialism left democratic structures with a mere symbolic role. They were primarily 'a device for legitimating the power of the apparatus'. So despite the original Bolshevik claims of representing the people and their needs, there was no democracy under the Tsarist police state and

> no party can claim to speak for a class except in a democracy; and no modern democracy has known for more than a few years what could properly be called "the party of a class". Indeed, it is a thing dangerous to democracy, though democracy alone makes it possible (Plamenatz 1954:324).

Whilst the "democratic" structures in the Soviet Union essentially served to endorse official decisions, their existence had a role in the acceptance of democratic principles. As noted by Rigby (1992:17):

> like all such exercises in institutionalised hypocrisy, which serve to affirm a value or ideal in the very process of betraying it, the daily travesty of democracy helped to nourish the soil for its eventual revival.

Unique characteristics of Russia's or Lithuania's past have had a direct impact on the shape of current political values. A society's political culture consists of the collective orientations and attitudes of the citizens. Each society's political culture differs according to their unique experiences. A country's political culture has continuity in that past distributions of values fashion future distributions (Reisinger *et al.* 1994:187). The experiences of some societies may facilitate the working of democracy better than others. Lithuania's period of independence during the two world wars and the centuries of partially-democratic rule under the 'Union of Lublin' with Poland, together with the geographical closeness to Western Europe, has been noted as favouring the development of democracy since 1990 (Reisinger *et al.* 1994:187, 189). Smith (1994:130) has noted that the existence of a pre-Soviet civic culture in Lithuania, Latvia, and Estonia (unlike other Russian Republics) which would be more conducive to political participation. Although acknowledging the importance of history, Reisinger *et al.* (1994:187), arguing against those who emphasise the weight of history, point to urbanisation and modernisation as the major factor in changing political culture.

The heritage of Russian authoritarianism has led some theorists to argue that people in the former communist bloc are ill prepared for securing

democracy. Likewise, indoctrination of ideological values, which downplayed the notion of individual rights and pluralism, is generally viewed as a hindrance to the development of democratic institutions (Reisinger *et al.* 1994:184). The Soviet authoritarian strain tended to instill in the people a desire for order and a preference for strong leadership. Owing to the different historical experiences, the Russian leaning towards authoritarianism is not a part of Lithuania's patrimony. Therefore, pro-authoritarian values should be greatest in Russia and Ukraine and lower in Lithuania. The data obtained by Reisinger *et al.* (1994) indicates that, while Lithuanians on average scored slightly lower, the differences in the means between Lithuania and the either of the other two states is not statistically significant. Further, the desire for order increased in all three states from 1991 to 1992 when rising economic and physical insecurity made order more appealing. Lithuanians showed less concern for order in 1991 than the other two states but this jumped sharply in 1992 undercutting the earlier distinction. They, therefore, reject the "historically derived political culture" hypothesis (Reisinger *et al.* 1994:191).

As noted below, Lithuanians also showed a high level of support for Stalin at this time which might suggest support for order and strong leadership. It is, therefore, difficult to make asserted conclusions about such responses. For example, one could point to a two-way influence in Lithuania. A history of occupation and of independence and leadership. The fifty year annexation during which citizens were subjected to indoctrination and sovietisation forms a recent historical influence and the centuries of Russian occupation form a deeper historical influence. This is juxtaposed with the memory of independence in the inter-war period, together with an affiliation with the era of the Grand Duchy of Lithuania. The memories of the independence interlude served to amplify the dissatisfaction with the Soviet system and, therefore were an important impetus for secession and for the way in which the political system has developed (Viesulas 1993:5). Hence, there exists in Lithuania a general rejection of Soviet ideology and strong support for democratic indicators as well as some Soviet impacts on democratic values and on the political and legal structures which affect the way in which people can participate (see 7.2.2.3).

Reisinger *et al.* (1994) also reject the hypothesis that indoctrination is the major influence on the political culture of post Soviet societies. The logic behind this hypothesis is that '"what makes Communist societies unique is

the aggressive effort on the part of all the regimes over several generations to make basically the same official political culture the only political culture"' (McGregor in Reisinger *et al*. 1994:195). The indoctrination process is viewed as anti-democratic and its influence a problem for the fledgling democracies in the region. According to such proponents, the only hope for democracy is that indoctrination did not have a permanent hold on the citizens. Reisinger *et al*. (1994:195) point out that recent surveys indicate unexpectedly high levels of support for non-Soviet values such as individual rights and democratic institutions. If indoctrination had the desired effect, support for communist values should be high and particularly higher in Russia and Ukraine than in Lithuania given that the latter spent twenty years less under Soviet rule during which time they experienced democratic rule. Yet, survey data indicates that, in 1992, Lithuanians were more supportive of Stalin's contribution to society than the Ukraine and only slightly less so than Russia at the same time. Support for Stalin was significantly lower in Lithuania in 1990 but increased to similar levels as Ukraine and Russia in 1991 and then doubled in 1992. The authors conclude that the indoctrination hypothesis cannot explain why Lithuanians would given Stalin greater credit than those in Ukraine. They do, however, note that the Lithuanian responses most closely support the indoctrination theory when they are separated into age groups (Reisinger *et al*. 1994:196-97) (see also 7.2.2.2).

Reisinger *et al*. (1994:200-201) refer to a large body of research which claims that modernisation produces fundamental shifts in attitudes and behaviour in society. They suggest that the modernisation changes in the 1920s and 1930s such as industrialisation of the economy, collectivised agriculture, urbanisation, increased literacy, and access to education, made Soviet society more open to democratic and market reforms. Others have disagreed saying that Soviet society was always rural and pre-modern and that the industrialisation period was not the same as experienced in the West and would not have produced equivalent changes in values and behaviour.

As noted above, Reisinger *et al*. (1994) ultimately reject the historical and indoctrination hypotheses in favour of the modernisation theory. It seems that the authors perhaps try too hard to dismiss the first two hypotheses in support of their preferred modernisation theory. One could argue that both indoctrination and modernisation are actually part of the history of each state in the region and the impact will vary in each country depending on various other influences and events. Further, indoctrination was part of the

modernisation process. Therefore, it is not necessary to reject such hypotheses but, rather, acknowledge the unique combination of factors relevant to the particular society's development. The authors do, however, argue that neither history nor indoctrination 'can account for the diversity of political outlooks' (1994:204) and, in this way, acknowledge the interrelationships. They also accept the role recent tumultuous history has played. In Lithuania, accounts of Lithuania's dominance in the region in the fifteenth century, partial democratic rule together with Poland, Czarist rule, independence 1918-1939, cultural and political suppression, secrecy, and corruption under the Soviets, and the legacy of administrative and political structures which do not favour public participation have all impacted (positively and negatively) on the political culture of the country. There are, then, reasons why democracy should be more secure in Lithuania than Russia or Ukraine but there are also problems associated with historical developments and with more recent experiences.

7.2.2.2 Perceptions of Democracy

Reisinger *et al.* (1994:196) note that analysts predict a generation's values based on the experiences of that generation as young adults. They therefore assume that, allowing for a greater impact of indoctrination on the young adults of 1920s and 1930s who now form the older cohort of respondents, acceptance of Soviet values should be highest among that generation and lower but stable across later generations. This premise does not seem appropriate in the Lithuanian case given that young adults in the 1920s and 1930s were experiencing a period of independence and might be, therefore, more likely to support the rights of individuals and pluralism than those in Russia and Ukraine. Older Lithuanians remember this period and have tended to be most consistent in their democratic behaviour such as participating in protest rallies while the youngest generation have experienced the period of political excitement and renewal. They have also had the opportunity to travel and experience other political systems in the West. It is not surprising, then, that the Reisinger et*et al.* al. (1994:198) found the older cohort less supportive of Stalin and communist values than the next four decades with the youngest group the least supportive of Stalin's ideology. Whilst they appear surprised that Lithuania most closely supports the indoctrination hypothesis with the middle range of respondents most supportive of Soviet ideology (having come of age during the Soviet period) and, therefore, most affected by the indoctrination process, this should have

been largely expected. The authors then reject the hypothesis that indoctrination had a society-wide impact noting that proponents of the view do not argue that only one or two generations will be affected. Such conclusions tend to undermine their own findings. They suggest that regime indoctrination had to compete with other influences such as societal transformation or modernisation.

Postmaterialist values are considered an indicator of democratic values in society and were used in surveys designed to identify democratic tendencies, along with interpersonal trust, support for party competition, belief in the right to oppose government, and a commitment to individual rights. It is interesting to note that environmental concern is often referred to as a post-materialist value since it does not necessarily involve material concerns. According to Reisinger *et al.* (1994:211), postmaterialist values were found to be more widespread in Lithuania than in Ukraine and Russia which, they conclude, indicates economic and internal security concerns are unlikely to weaken commitment to liberal democracy. The afore-mentioned fears of the ephemeral nature of democratic values in the region are valid and are also relevant to the demise of environmental concern in Lithuania since the restoration of independence (as discussed in Chapter 4). In this sense, environmental concerns, relayed by the community not only as part of public surveying but openly as a political protest, were a fashion (not unlike Snickers, Beneton, or Coca-Cola) which have not withstood the test of time. Whilst the fervour of social protest has definitely waned, however, the considerable defeat of the Democratic Labour Party in October 1996 might suggest a measure of active concern amongst the population. Yet, on the other hand, the poor voter turn out (52%) has led some to argue that the Conservative victory had more to do with former LDDP voters opting not to participate in the elections than with a massive swing to the right (see 7.2.1.4).

The argument - that support for democracy [along with environmentalism] has not involved internalised calculations of the costs and benefits and is only a passing phase - holds some wait but has been strongly and adequately challenged by Reisinger *et al.* (1994 and 1995) and Gibson (1996). But Gibson (1996:400) points out that such survey data was collected at a time of 'wild optimism about the possibilities of democracy' which tend to have been deadened by the 'often distasteful realities of democratic politics'. However, if it is the case, the weakened democratic values (and, possibly, environmental values) may also be strengthened with time. The decline in support under

various materialistic pressures would be regained over time as Lithuanians and others in the region develop and internalise such values as a country rather than espousing them in populist political protest. This would partly occur as a result of international relations and cooperation.

Support for individualism was found to be highest in Lithuania and lowest in Russia but generally well accepted in all three (Reisinger *et al.* 1994:211). As noted by Gibson (1996), demands for liberal rights seem to coexist with a desire for order. Lithuanians espouse a desire for strong leadership, but this is not necessarily an anti-democratic preference. Desire for leadership scored highly in Lithuania in 1992 surveys conducted by Reisinger *et al.* (1994). This could be correlated with the national election in which Brazauskas became leader in the ensuing Presidential elections. Voters saw a need for experience in government, especially with regards to economic conditions which were particularly unstable. They have since exercised their right to dismiss the government at the 1996 national elections.

7.2.2.3 Citizenship and Public participation

'From the ancient Greeks onward, theorists have argued that democratic institutions must quickly fail without supportive public behaviour' (Reisinger *et al.* 1994:204). Values which will accommodate democracy need to be present in society at the time of establishing democratic institutions. The concern is that 'in the absence of such values, a burst of pro-democratic enthusiasm or a stratum of elites committed to democracy are unlikely to translate into stable democratic institutions' (Reisinger *et al.* 1994:204). This argument has had widespread acceptance and has been used to make pessimistic forecasts for democracy in the FSU. In fact, much of the political behaviour in Russia, Lithuania, and Ukraine appears to observers as undemocratic due to the political and economic turmoil in the region (Reisinger *et al.* 1994:205). The sections above have provided some evidence that democratic values were present in Lithuania at the time of secession which should provide the opportunity for maintaining democracy. The concern is, however, legitimate and, given that participation rates (particularly in protest action) have dropped since 1991, has some relevance for the prospects for democracy in the country. As mentioned in 7.2.2 above, it may be that such levels pick up again over time as the public internalise democratic values and learn how to participate in the political sphere if legal reform facilitates such involvement (see also 7.2.3).

Values are not always reflected in action. Support for democracy does not always lead to democratic behaviour. The theoretical basis for Gibson's (1996:396) article is that

> [in] order for mass political culture to influence politics, citizens must hold views toward democracy that are temporally stable, impervious to short-term economic failure, and connected to actual political behaviour.

Thus, action or behaviour is perhaps more important than the values respondents espouse in surveys. Action, in turn, is contingent on several factors, including the economic experience. Action, in the form of public participation, is central to democracy not only because it controls elite behaviour but because 'an active citizenry is involved in the actual processes that make democracy what it is; the members of society must *do* democracy' (Reisinger *et al.* 1995:944). The surveys do, however, give an indication of potential, even if other factors hinder acting on those apparent values.

Participation in various social and political organisations is one indicator of democracy working in a society. In Russia, Ukraine, and Lithuania, membership levels in social and political organisations are low (11.2 per cent in 1990 and 8 per cent in 1992) compared with other democratic, "civil" societies leaving the formal democratic structures without the support of various NGOs as found in those other societies. Membership of political parties is even lower (1 per cent) and is minuscule even considering the secular decline in party membership found in some Western democracies (Reisinger *et al.* 1995:942, 959). Factors affecting the membership decline include the realisation of the difficulties of reform, economic hardship as a result of market reforms, and increasing problems of law and order. But perhaps the most influential factor has been the fact that secession was a major motivation for political activism in the late 1980s and early 1990s and, once achieved, people's interest in politics decreased (Reisinger *et al.* 1995:951) (see also Chapter 4). The Green movement and other environmental groups in Lithuania have faced reducing membership in the years since independence was restored. Section 7.2.2.4 provides an overview of those groups and discusses their role in the public sphere.

During the same period, Lithuania experienced a decline in "unconventional" behaviour such as participation in strikes and rallies. In 1990, 79 per cent of the population had been involved in such behaviour while this fell to 64 per cent in 1992 (Reisinger *et al.* 1995:964). There has been a clear decline in

the number of and participation rates in green protests or, at least, a decline in their effectiveness. As Chapters 2, 3, and 4 demonstrated, the Green movement has been successful in halting a number of environmentally degrading projects. Most of these have occurred in the 1988-1990 period such as the halting of construction of the third unit at Ignalina, the end to construction at the Kruonis HAS, the halting of oil drilling in the Neringa National Park and Baltic Sea, successfully opposing a local airport, Presidential villa, and church in the same coastal park, and influencing the site location for the proposed oil terminal (Stec 1995:117-118 and personal communication with Green members). Although the Lithuanian Green Movement, particularly *Atgaja*, have continued with public education programmes in the fields of bicycle promotion, waste reduction and collection, and organic farming, these have not attracted the level of support that characterised rallies in the 1988-1991 period. Nor have they had such dramatic results, not least of all because of the resistance and unresponsiveness of government.

Voter turn-out has also been declining since the 1992 national elections. The significance of that election drew 75 per cent of eligible voters to the polling booths, slightly higher than participation in the 1990 elections (72 per cent). But only 43 per cent turned out for the municipal elections in March 1995 which were seen as a turning point for the right-of-centre opposition parties and confirmation of the Christian Democratic Party as the third major party (Girnius 1995:57) in a field of around twenty eight parties in Lithuania. The national elections held in October 1996 attracted only 52 per cent of eligible voters and the vote in some constituencies could not be decided due to poor participation (see 7.2.1.4) (*Vyriausybes Zinios*, no. 111 1996; 3 and Algis Krupavicius pers. comm., March 1997).

Low level membership in organisations, low levels of support for democratic institutions, and poor electoral turnout might be more an indication of the public's opinion of candidates, institutions, or parties than a reflection of undemocratic values in society (Reisinger *et al*. 1994:206). For example, the fall in Green support in Lithuania is directly linked to the action of key figures who have either moved on to government positions or become private consultants (Stec 1995:88). This trend has also contributed to the reduction in numbers at environmental protests because key figures are no longer there to attract support as well as the sense of abandonment and disillusionment felt by previous supporters over actions of their former leaders (see also 4.3.4.1). It is, therefore, important to separate public opinion

from other aspects of society which hinder or promote democratic behaviour. As already noted, for example, economic problems (materialist concerns) hinder the process. The economic capacity of individuals affects there ability to be involved in political decision-making in any democracy and it is particularly marked in the post-communist region. However, there are other factors such as the ill-equipped administrative structures and laws (see 7.4) which restrict participation and, therefore, the democratic process.

When citizens are willing to be participate in the process, the legal structures often restrict involvement not only due to a lack of understanding regarding rights and available opportunities for participation. The Lithuanian Government, in its report to UNCED 1992, stated that it aimed to establish a system of informing the public and relevant NGOs about environmental matters, particularly matters of environmental policy. By doing so, they aimed to secure 'broad public participation in a national discussion of possible measures to continuously improve upon and enhance existing environmental practice' (Environmental Protection Department 1992:101). However, there are no laws or regulations which provide for any form of public involvement procedure in the drafting of laws or deliberations concerning them at either the parliamentary or governmental level. Further, the provisions for public participation in the *Law on Environmental Protection 1992* (Chapter 2, Article 7) are too broad to be translated into practice.

There is an opportunity for citizens or public organisations to participate in the legislative process by submitting draft legislation to the Supreme Council for consideration, however this must be accompanied by a petition of at least 50,000 eligible voters regardless of whether the issue originates in the city or whether it is a local problem where communities are smaller. In practice, NGOs are unlikely to be invited to contribute to the drafting process. The calling of referenda requires 300 000 signatures which causes more problems for local communities. The right to referendum has not been used for the purpose of environmental protection (Vainius 1995:89 and Stec 1995:87, 95-6) (see also 7.2.2.4). According to Article 8(9) of the LEP, environmental protection officers have a duty to encourage public participation, while Article 7 states that citizens have the right to 'insist upon the punishment' of officers who have improperly carried out the duties ascribed to them. The latter could be used to ensure officials comply with their duties under Article 8(9).

Public participation in the political sphere is one aspect of democratic behaviour which has been shown to be on the decline. But democracy also depends on the behaviour of those in power. In terms of the prospects for democracy, the values held by the elite (including government) and the strategies they employ are more influential and, therefore, more important to analyse, than those of the citizenry since they are the ones in powerful positions with the capacity to control political direction (Reisinger *et al.* 1994:220).

In both Lithuania and Russia, Reisinger *et al.* (1994:217) found urban professionals to have the highest score on questions relating to democratic values. Professionals are more likely to be politically influential and active in any society and they were an influential group in the transformations of 1990 throughout the communist bloc. In some ways, their values may be more indicative of the prospects for democratisation than the mean of society attitudes. This is especially likely give that, in most democracies, only a small minority participates in political activity beyond voting (Dalton 1988 in Reisinger *et al.* 1995:943). Those with these values are typically younger, financially better off and claim to be more participatory (Reisinger *et al.* 1994:217). The data collected by Reisinger *et al.* (1995:966) suggests that Ukraine, Lithuania, and European Russia have higher levels of political activism than generally found in the West in terms of "unconventional" behaviour but membership levels in social organisations and political parties are lower than in Western democracies.

7.2.2.4 Environmental Non-Government Organisations (NGOs) in Lithuania

It is argued in 6.2.3.2 that NGO support was crucial not only because of their role in promoting "soft" issues such as the environment, but because facilitating their participation in the political process ensures environmental issues remain on the political agenda. Such participation is also a fundamental facet of democratic society. The Green Movement (incorporating environmental NGOs) can help deepen democracy in Lithuanian society through the promotion of an environmental ethic, thereby increasing public awareness about the value of an unpolluted society and the role of the public in bringing this about (Peterson 1993:227). The administrative structure in Lithuania still does not effectively accommodate participation by NGOs. Some internationally supported technical assistance organisations are, at times, invited to contribute to working groups for legislation preparation

but grassroots NGOs are generally excluded (Stec 1995:97).

Unlike some countries, the Lithuanian Green Movement is a formal organisation of which various other organisations and individuals are members. It acts as an umbrella organisation to the approximately 80 environmental NGOs, however, it also acts as an independent body. Not all environmental NGOs are affiliated with the Green movement. The Lithuanian Green Movement has combined office space with *Atgaja,* an environmental organisation in Kaunas established by Saulius Gricius, Saulius Piksrys, and Remigijus Ciegis, the founding fathers of the Green Movement (see 4.3.1). They have shared offices and there is a significant overlap in active members. *Atgaja,* the Lithuanian Green Movement, Lithuanian Fund for Nature (LGF), the Lithuanian Orthonological Society, the Lithuanian Society of Geographers, and the Lithuanian Society of Nature are the main environmental NGOs that engage in research, public actions, legislation drafting, and preparation of inventories and reports (Vainius 1996:41).

The majority of national and local environmental NGOs co-operate with foreign or international organisations and some are funded by such groups (Vainius 1995:93). Interestingly, the international affiliations have influenced their focus and style of operation. LGF is funded by World Wide Fund for Nature which has traditionally focused on wildlife protection and tends to employ relatively conservative strategies. *Atgaja,* or more specifically, the Lithuanian Green Movement, has had a long involvement with Friends of the Earth and was recently accepted as a member in 1997. FOE have been involved in a long campaign against nuclear power as well as nature based programmes. Atgaja and the Green Movement jointly house the Energy and Air Pollution library in their Kaunas offices. It will be to the benefit of the Lithuanian environment if such groups continue to focus on a range of issues and with a variety of strategies. The conservative approach of LGF has enabled them to become the most involved in law drafting and other government initiatives. For the first five years of their existence, LGF held offices in the MEP building which also influenced their relationship with government. In general, the relationship between ministries and NGOs is described as the worst while relations between environmental groups and local authorities and the parliamentary committee are considered to be better (Vainius 1995:93). Meanwhile the more radical approach of the Lithuanian Green Movement has continued to keep environmental issues in the public view under difficult circumstances, particularly in relation to nuclear power.

The Lithuanian Society for Nature has its roots in the Association for the Adorning of Lithuania which operated from 1921-1940 as well as the Nature Protection Association of Lithuania which was established in 1960[3]. The regulations of the organisation were registered with the Department of Justice in May 1991. The main goals of the group were stated as; to protect and foster the nature of Lithuania and her natural monuments, to adorn the natural surroundings of villages and cities, and to foster forests, waters, and their shores (*Musu Gamta* 1991, volume 6:6). In order to achieve these goals, the organisation has a public education focus, in particular in arranging courses, lectures, and meetings on ecological matters. On the announcement of their registration, they asserted that they would collaborate with the various authorities, other environmental organisations, schools, and religious organisations in order to promote environmental protection (*Musu Gamta* 1991, volume 6:6).

Unfortunately, only a third of NGOs are active in using and promoting avenues of public participation to protest against certain activities, or to support environmentally sensitive projects. Individuals citizens are even less active. Vainius (1996:41) argues that this is related to the psychological climate whereby support for such groups is less likely. He also notes the problem of redirecting opposition to environmental degradation from the Soviet authorities to the Lithuanian authorities which, was discussed in Chapter 4, is related to the national orientation of the movements.

7.2.3 Problems in Developing a New Political Culture

As noted in section 7.2.2, there has been concern expressed that support for democratic institutions and processes is transitory in Lithuania and other countries in the FSU. Those who hold such views do not hold much hope for democracy in the region. The argument is occasionally put that economic values (i.e. a desire for prosperity) has been the controlling influence for change in the FSU. Thus, democratic values are seen as a reflection of economic concerns especially given that, generally, people's interest in political organisation is governed by their desire for economic well-being (Gibson 1996:401, 406). In such a way, democratic reform might have a purely instrumental value, a means to improved economic conditions.

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[3] Such groups were tolerated in the Soviet Union in the 1960s if they focused on nature protection. Confronting industrial pollution was considered to be subversive (French 1990:30).

As noted in the previous Chapter, economic aid has often been conditional upon political reforms which may have exacerbated the tendency to value democracy as an instrument for economic reform (Gibson 1996:406). If this is the case, democracy may weaken if economic conditions do not improve in the near future. Ruperez (1994:ii) argues that the deterioration of economic conditions in the FSU is a major stumbling block for democratisation. Gibson's data suggests that economic optimism was more likely to be associated with *greater* support for democratic institutions but, in general, preferences for democracy are relatively independent from the economic experiences of most people (Gibson 1996:409, 416). The economic difficulties currently faced by many in Lithuania (as discussed in Chapter 5) can at least be seen as a hindrance to democratic support and behaviour (as they are in any democracy). Yet the public's role of controlling the elite, making them accountable for their actions, has not been institutionalised in a network of social groups and organisations which tends to characterise stable democracies (Reisinger *et al.* 1995:967).

The failure of public scrutiny to become institutionalised as yet can be explained by a number of factors. As discussed in 7.4, there are many laws and regulations in Lithuania which relate to environmental protection in some way. Some of these pay only cursory or broad attention to the avenues of public participation or consultation. Others such as the compilation of land use laws have more detailed mechanisms. Thus, inadequate provisions and mechanisms for public involvement in environmental decision-making is the primary reason why a political culture of public involvement has not yet matured. In addition, the laws are, at times, contradictory and, therefore, difficult to use (Vainius 1995:95).

There are other reasons such as a loss in enthusiasm among the public due to the government's failure to support and promote the avenues which do exist. Stec (1995:88) noted that there was 'a general feeling among interested members of the public that the government [was] becoming increasingly isolated from public participation'. For example, during the oil terminal "debate" which is discussed in Chapter 2, the Government did not initiate any meetings or public hearings (Vainius 1995:94). This has exacerbated the decline in environmental action since those who are committed, despite economic problems, are discouraged by the unresponsiveness of government to public opinion (Stec 1995:114). Further, notes Stec (1995:89), the relationship between the green movement and the government is reportedly the worst

among the Baltic States. Stec (1995:114) refers to the characterisation of the public, amongst officials, as "creating problems" for the government including some working in the Ministry of Environmental Protection. There is an assumption that the public is against all development or activity. This is somewhat misplaced given the evidence provided in this thesis as to the factors in people's lives which have influenced their concern and/or action over environmental problems. As a result of the bureaucracy's attitude toward the public, NGOs and other citizens are normally excluded from decision-making groups such as the advisory board on environmental expertise (Stec 1995:114).

A consequence of such attitudes is a tendency not to release information and to attempt to keep activities secret from potential opposition. Thus, public participation and the development of a new democratic political culture are further hindered by a delay in the announcement of proposed or pending decisions, plans, and regulations (Vainius 1995:95). Such undemocratic behaviour is reminiscent of the Soviet period and, if it continues, is certainly destructive to the process of democratisation. What is sometimes declared as the 'Lithuanian way of doing things' is actually the classically Soviet way of doing things (Lieven 1994:31). The problem is that the political transformation mainly consisted of the displacement of the Communist Party and the legal setting in which other parties could develop. However, 'the institutions of government, the bureaucracy, and the economy largely remained in place' (Mason 1992:69). As a fundamental facet of these structures, a mind-set of ideas and practices also remained. Although the reforms eliminated the Communist party's political monopoly, the economic and financial resources of the former Communist elite were left intact. They also had the advantage of an extensive membership and established office facilities (Viesulas 1993:16). Thus, 'it will take decades of democratic experience to eradicate dictatorial tendencies that continue to pervade the political cultures of the newly independent republics' (Peterson 1993:221).

Corruption, as mentioned in 7.2.1.3, is often responsible for the lag in public announcements. A recent survey revealed that of 200 Lithuanian businesses, 54 per cent had paid bribes to government officials while 80 per cent of the 200 foreign businesses interviewed had been asked for bribes with 90 percent indicating that corruption was an obstacle to economic development and investment in the country (Girnius 1995:57). Among the public, there is concern regarding being involved in protests about controversial businesses

(much of which is considered to be controlled by a "Mafia") for fear of violence directed at them or their property (Vainius 1995:95). Such fears are not allayed by trust in the security provided by the government, particularly given the general perception of government corruption and the criminal activity openly directed toward businesses and the media. In 1995, less than 25 per cent of Lithuanians surveyed trusted the parliament, government, police, the courts, and the President's office (Girnius 1995:57).

The failure of Government to promote public participation and the legal avenues available to facilitate it is related to another problem in developing a new political culture. Citizens are generally unaware of their rights (aside from voting rights) and/or the way in which they can defend them. The deluge of legislation that has been formed or amended is difficult enough for the lawyers to keep up with. In fact, many lawyers are not familiar with the environmental legislation which restricts any desired action in court. There have not been any comprehensive public education programmes aimed at informing citizens of their rights and duties in relation to environmental issues (Vainius 1995:92-3). Also, voters are still unfamiliar with bargaining with their voting power. Further, this bargaining power of votes is not fully appreciated by Lithuanian politicians. Viesulas (1996:22) has asserted that Lithuanian voters 'are not used to being heard except by non-democratic means such as bribery, extortion and nepotistic money-making in the black market economy'.

Another problem is that there is little legal assistance for concerned citizens or groups when using participation avenues such as the courts. Lawyers are generally reluctant to assist complainants or are uninterested in environmental problems (Vainius 1995:93, 95). A further limitation of the prospects for democracy is the region's poor record on political tolerance, particularly in Ukraine and Russia. Ruperez (1994:ii) contends that:

> Most former Soviet Republics still lack a "democratic culture", which involves the respect for others, the ability to distinguish between personal opinion and political programmes, the acceptance of the need to relinquish as well as assume power, a capacity for rational debate and, finally, a spirit of compromise.

Respondents of surveys overwhelmingly supported the notion of repression against their political enemies, indicating that while there is widespread support for institutions and political rights of the majority, there is generally opposition to those of unpopular political minorities (Gibson 1996: 400, 403).

However, as economic conditions improve, together with a stronger internalisation of democratic values as a norm of society, support for democracy and associated democratic behaviour should be strengthened.

The historical context (namely the influence of the authoritarian one party system) of democracy in the FSU presented in section 7.2.2.1 has been the basis for arguments that democracy is unlikely to be maintained in such countries. It is, however, generally presumed that in the future Lithuania will be less authoritarian and less indoctrinated by communist ideology and, therefore, more democratic than Russia or Ukraine. Yet the research surveys indicate that this is not the case. Reisinger *et al.* (1994:220) argue that if Lithuania's prospects are better it is because of common acceptance of democratic principles across social classes, a feature not found in Russia and Ukraine. Since organisational development remains limited, democratic institutions and processes lack the support which exists in established democracies. Reisinger *et al.* (1995:967) conclude that while there are clear signs of democratic values and behaviour in Lithuania, 'democratic governance in the Soviet successor states will remain fragile for some time'.

7.3 **Rejoining the International Community**

7.3.1 Preparing for Membership of the European Union

The concept of a unified new Europe seems more likely to be realised following the breakdown of communism which has left several re-emerging nations anxious to join the European Union (EU). For Lithuania, membership is an "end goal" which would be the culmination of a period of transition in the year 2000. The transition is from Soviet membership to European membership. One problem has been that the Europe to which many politicians would like to return is not the Europe of today but an idealised Europe of the 1920s and 1930s (Lieven 1993:374).

Lithuania has submitted application to the EU (December 1995) and has already been accepted into the Council of Europe (CE). Given the strict environmental standards of the EU, Lithuania's inclusion in the community is certain to have an impact on environmental policy. The EU itself has problems balancing economic and environmental objectives (see 5.4.4 and 5.4.4.1) and will be well aware of Lithuania's particular difficulties, given the poor state of their economy. As discussed in Chapter 6, Lithuania has already

begun the process of harmonising environment laws with EU standards. Theoretically, acceptance may depend on a commitment to improving environmental standards and their enforcement, however, inclusion is more likely to depend on economic performance. The EU does not have environmental requirements for membership, however, there are economic stipulations such as a minimum level of inflation.[4]

All three Baltic States have been pushing for membership of the European Union and, in this way, will need to look more closely at levels of cooperation with each other and the rest of Europe. They have been granted membership of the CE and the respective Presidents believe full membership of the EU will follow. According to some reports, whereas in the past Brussels has been inward-looking, 'the Baltic region [is] now a major focus of EU policy' (*The Baltic Independent* 5(214), 2; May 1994). One step toward creating closer connections, thereby allowing environmental cooperation, was the development of the EU Department of Eastern and Central European Countries and Baltic States, a delegation of which has begun talks with a Lithuanian team headed by the Deputy Minister for Foreign Affairs.

In the last few years Lithuania has stepped up the campaign to join the EU. Membership is unanimously approved by the major political parties and polls indicate that around 70 per cent of Lithuanians support integration. According to the Deputy Minister, Albinas Januska, it is no longer a purely an objective of foreign policy, it has also become the priority of internal affairs (Januska 1996:12-13). From the middle of 1995, says Januska (1996:12), Lithuania began the task of harmonising the legal system with that of the EU in an effort to comply with the recommendations on the integration into the internal market of the union. There have also been institutional changes, including the introduction of a system of Euro-institutions in May, 1995 and various commissions and committees designed to facilitate, support,

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4. The environmental problems of the United Kingdom, although not ignored by the EC (EU), have been allowed to persist despite membership. The environmental policy of the EC did have an impact on the UK, particularly in regard to water quality at beaches which was poor yet , at the same time, there have been concessions of longer time frames the stabilisation of certain emissions and they have continued to struggle to achieve EC water quality standards. Another example of the Council of Europe's consideration of membership based on factors other than economy is its encouragement of the Latvian parliament to reconsider some elements of its proposed citizenship laws. These have been reviewed several times and, at the time of writing, some articles were still under consideration. The general view is that the CE will expect certain human rights issues regarding Russians in Latvia to be resolved before membership is granted. [However, some might view this unfavourably given Russia's admission into the CE in January 1996 despite ongoing problems in Chechnya].

and coordinate the necessary steps toward inclusion (Januska 1996:12). In addition, the future of the environment might mean that Europe will not be able to ignore the problems in Eastern Europe. While Western Europe could, feasibly, resolve future problems (such as those associated with global warming) by technical means, their most serious environmental concerns will arise from developments elsewhere, such as Eastern Europe. The legacy of Communist rule will not easily be reversed, even by the wealthy EU (Kennedy 1993:277-8).

The CE is the broadest-based international organisation for European countries, promoting human rights, parliamentary democracy, and the integration of Europe (Wolfgast 1993) and membership is seen as a stepping stone to the EU. Lithuania became a member on May 11, 1993 by a unanimous vote and Estonia gained membership on May 13, 1993 by a majority vote.[5] President Algirdas Brazauskas, admitted that EU membership would mean forgoing a small part of sovereignty and increasing involvement in tough competition (Uzkalnis, 1993). However it could mean being part of the future world power.

> The European Community, if it were to become politically cohesive, would have the population, resources, economic wealth, technology, and actual and potential military strength to be the preeminent power of the twenty-first century (Kennedy 1993:258).

From a local environmental point of view, Lithuania's (as well as Estonia's and Latvia's) full membership of the European Union, would be extremely important since all Member States must comply with the EU's strict standards. This membership, together with the fact that Lithuania has become a signatory to such international agreements as the Baltic Sea Declaration, will put increasing pressure on the newly independent states to measure up to the environmental requirements. However, the broader environmental and social problems associated with modern life may not be addressed by such a regional block. Firstly, because of environmental problems, such as air pollution which the free trade dependent EU exacerbates and, secondly, because of the way in which the EU can restrict environmentally progressive measures in order to promote free trade (see 5.4.4.1).

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5. Two members of the Council, one from Greece and the other from Portugal, voted against Estonia's admission. The vote for Estonia's admission was successful despite efforts of the Russian delegate to prevent it on the grounds of human rights violations against Russians living in Estonia (*The Baltic Independent* 4(162), 1; May 21-27 1993). Latvia then faced the same criticism before eventually being accepted as a member.

7.3.1.1 Integration or Separation

In 1991, Lithuania escaped from the grasp of the internationalist Soviet Union whereby the interdependence of all the republics had been constructed with the specific purpose of preventing secession. Although this was, in the end, unsuccessful, the republics are left with fragile economies and many micro problems related to the former macro approach. It appears ironic that Lithuania should desire entry into yet another union which openly espouses the concept of interdependence and internationalism. Both Gorbachev (who was always mistrusted in Lithuania) and Pope John Paul II (the leader of the majority religion in Lithuania) visualised a European Union with boundaries into Eastern Europe, Ukraine, and European Russia. Gorbachev defined it as a 'community of sovereign democratic states with a high level of interdependence' and that 'European culture...has many faces, yet forms a single entity' (Story 1990:42, 49). These statements could have easily been made by European leaders.

Yet there are, of course, differences between the two unions. Whilst Story's essay ('Europe's future: Western Union of Common Home?' 1990) points out that no Soviet troops stirred during the revolutions in East Germany, Czechoslovakia, Bulgaria, and Romania in 1989, it should be noted that the essay was written before the massacres of January 1991 in Lithuania and Latvia, where Soviet tanks crushed civilians protecting media outlets. The EU has a rigid democratic structure for election of representatives as well as for decisions made within the various committees. While the EU is unlikely to suppress religion, culture, and language (though it could suppress an economy) as part of its policy or to send tanks into Member States to reinforce its central authority, the similarities between the two unions of independent states remains rather striking.

7.3.1.2 Environmental Policy in the EU

As discussed in section 5.4.4, the environment has had a role in EU policy since 1972 but an environmental policy was not enacted until 1987. This decision to give legal and political support for the concept of environmental protection in Europe was based on a growing concern over transboundary pollution in the region (EC 1990:5-7). The Commission has claimed that a key principle of EU policy is that the strict standards developed are both environmentally and economically necessary thereby dispelling myths that

environmental standards are an unnecessary burden on industry and emphasising that they can, and should, be part of economic growth and job creation (EC 1990:9). As demonstrated in Chapter 5, in practice, the concept of free trade often has precedence over environmental protection. However, the acceptance by Lithuania of EU standards might be of environmental benefit, with or without inclusion in the organisation. The recently drafted and/or enacted laws relating to the environment have been based on EU requirements (see 7.4).

There will always be conflicts between environmental aims and the maintenance of free trade in the EU. Common standards are generally of benefit to the environment but could suppress ecological advances in individual Member States which want to implement more stringent standards. Such a situation could not occur in the USA, where national standards are set as a baseline leaving the option to set higher standards with the State governments. The EU has been an important ally to the environment movement in the UK by challenging the UK government's deregulating policies. However, in a country with a good environmental record such as Denmark, EU laws have tended to weaken domestic regulations (Lang & Hines 1993:67-8). The legalities of implementing environmental policy have already begun in the European Court of Justice while political divides and financial costs to the Community also complicate matters.

The Commission (the executive branch) is the guardian of the Maastricht Treaty, so decisions largely rest with its members who do not necessarily act on the vote of the European Parliament. Previously, environmental proposals required a unanimous vote but, since 1987, a majority vote will now suffice, leaving it impossible for one or two "dirty" countries to block Community action. Equally, however, a few of the more environmentally conscious Member Sates may be outvoted by a cautious majority. Once the decision is made, the Commission might not agree to amend the proposal. Proposals of the Commission can only be overturned by a unanimous vote of Member States (EC 1990:21 & 23).

The Commission can be overridden by the European Court of Justice. In the Danish bottle case, for example. The Commission ruled that the requirement of returnable containers for beer and soft drinks and the licensing of new containers, was a barrier to trade and therefore should be outlawed. The court decided that the Danish system could be justified on the grounds of

environmental protection (EC 1990:22). This is only part of the result. To implement the refillable policy it required a limitation on the bottle sizes and shapes of both domestic and foreign bottles. This was not successful for imported bottles. The judgement thus favoured recycling over reusing (Lang & Hines 1993:68).

The EC developed a more dynamic environmental policy partly because of public opinion polls which suggested a swing toward the Green approach. However, political differences between the governments of Member States have complicated the process of consensus within the Community. Thus, politics (aside from national sentiment) can also hinder the effectiveness of a single European policy (EC 1990:15). The priority given to environmental protection by each Member State is bound to affect their vote at the Community level. The extent of Lithuania's commitment to environmental protection is therefore significant if the country is to be accepted into the Community. The EC has taken as a base a high level of protection put forward under Article 100 A of the Single European Act.

The recently formed European Environment Agency (EEA) does not have power and influence comparable with the US's Environmental Protection Agency, but a review in 1995 could see it take on further functions, including a key role in Environmental Impact Assessment (EIA) policy, though control over eco-labelling is a more likely concession. It would indeed be valuable if the EEA were given the task of revising and applying the EIA directive since it is 'currently one of the thorniest and most widely disregarded of the EU laws' (Wright & Shorey 1994). It is also suggested that the EEA assist the Commission with monitoring the implementation of the EU environmental laws but it is unlikely that this would include enforcement (Wright & Shorey 1994). According to James Cameron, a U.K. barrister and director of the Foundation for International Environmental Law and Development, there will be more opportunities for victims of pollution to sue infringing companies when the EU confirms its policy on civil liability for environmental harms (Knight 1994:68).

7.3.1.3 Implications for Lithuania

The previous chapters demonstrate the way in which environmental issues played a major part in the secession from the Soviet Union. Lithuania's has historical connection with the land inherited from its pagan ancestors

contributed to the national sentiment that led thousands to protest the construction of a third reactor at Ignalina NPP in 1989. Yet even with this heritage and a precedence of successful community action against environmental degradation, environmental issues soon dropped from the pinnacle of the political agenda following the restoration of independence in 1990/91.

Some action on environmental issues has been taken by independent governments and, in theory, Lithuania is well placed to act responsibly toward the environment. Yet the economic focus is and still will be the primary concern of the Lithuanian government. Decisions based on rational economics are more likely since the election of the conservative Government in October, 1996. The way in which environmental issues have lost support and particularly the way in which the governments of Lithuania have failed to fund adequately fund environmental issues supports the hypothesis of this thesis that, despite vehement environmental protests in the 1989-1991 period, economic issues, national sentiment, and weak administrative structures will predominate in Lithuania and limit effective environmental rehabilitation and protection. Inclusion in the EU will not change this situation. While it provides a yardstick in terms of environmental standards for Lithuania to follow, inclusion focuses on economic performance. In this way, membership (including the several-year process of applying) is more likely to aggravate Lithuania's internal conflict between economic, social, and environmental concerns. Hansen (1995:20) argues that membership should not be granted to the countries of CEE and FSU if it means degrading the environment whilst competing with other member states.

Since 1991, Lithuania has created several new conservation areas bringing the total of reserved land to approximately 11.2% of its territory. Varous laws have been prepared. Much of the legislation is primitive compared with the advances made in environmental legislation elsewhere in the world (such as Australia) yet needs to be considered in terms of the specific economic, social, and political problems (see 7.4.1). The success of Lithuania's environmental laws and policies is hard to determine. Decreases in pollution have tended to be due to a decrease in economic production rather than an indication of good environmental policies at work. While this is an advantage for the environment, the situation needs to be turned around so that when the economic situation improves environmental pollution does not increase. To ensure this, Lithuania needs to enforce the standards strongly and use

cleaner technology. Not all of such measures are expensive. Some emission control technology, for example, is relatively inexpensive and would decrease taxation fines by reducing waste (see 1.5).

Will Lithuania's environmental record affect their EU membership application? It is unlikely that membership will depend on environmental commitment - although comments made by the Commission regarding Sweden's application might suggest otherwise:

> The accession of Sweden [to the EC], with its sound and long-term environmental policy, would not only add to the quality of environmental standards, but would also promote a comprehensive approach aiming at overall integration of environmental considerations in all relevant policy areas (quoted in Lang & Hines 1993:70).

Whilst it might appear that environmental policy in Sweden contributed to their successful application to the EU, the sentiments of the Commission have failed to materialise. This is evident in the EU warning to the Swedish government that its proposed ban on imports of products containing ozone-depleting substances was contrary to the trade agreements of the EU (Lang & Hines 1993:69). Thus, once again, the EU has shown that it places free trade above its stated environmental concerns. The Norwegian Society for the Conservation of Nature (1994:3) have also noted the low priority given to environmental quality in terms of membership consideration, pointing out that membership is only contingent on the sate of the economy.

7.3.2 International Cooperation on Environmental Protection

As discussed in Chapter 3, international cooperation is difficult to achieve. The balancing of national and international interests is a feature of international law with which all countries are faced. Consensus on environmental measures is particularly difficult given the transboundary nature of a large percentage of pollution. Identifying where liability lies for infringements or determining the balance of inputs necessary for improvements is complicated by concerns for sovereignty. Lithuania has signed a number of international agreements on the environment (see Table 7.1). Becoming a party to such agreements and conventions could be seen as an indicator of commitment toward environmental protection. In this way, membership of conventions along with national legislation might be seen as a test of whether the government is committed to environmentally sustainability.

Table 7.1 Environmental Conventions and Protocols Binding on Lithuania, 1995

Convention		Date Acceded	Date Ratified
Convention on Climate Change	Rio 1992	11th June 1992	23rd February 1995
Convention on Wetlands of International Importance especially as Waterfowl Habitat	Ramsar 1971	10th June 1993	No need for ratification
Convention on Fishing and Conservation of the Living Resources in the Baltic Sea and Belts	Gdansk 1973	14th July 1992	No need for ratification
Convention on the Protection of the Marine Environment of the Baltic Sea Area	Helsinki 1974 and 1992	9th April 1992	No need for ratification
Convention on Future Multilateral Cooperation in the North-West Atlantic Fisheries	Ottawa 1978	14th July 1992	No need for ratification
Convention on Long-Range Transboundary Air Pollution[1]	Geneva 1979	27th October 1993	No need for ratification
Convention for the Protection of the Ozone Layer (inc Amendment and Protocol)	Vienna 1985	19th December 1994	No need for ratification
Protocol on Substances that Deplete the Ozone Layer	Montreal 1987	19th December 1994	No need for ratification
Convention on the Conservation of European Wildlife and Natural Habitats	Bern 1979	10th June 1993	28th September 1994
Convention for the Protection of Human Rights and Fundamental Freedoms	Rome 1950	28th September 1994	*
Statute of the International Atomic Energy Agency	Vienna 1957	1991	18th November 1993
Convention on Physical Protection of Nuclear Materials	1957	1993	6th January 1994
Convention on Nuclear Safety (NAA)	Vienna 1994	*	12th June 1996
Convention on Third Party Liability in the Field of Nuclear Energy	Paris 1960	1992	*
Convention on Civil Liability for Nuclear Damage	Vienna 1963	15th September 1992	15th December 1992
Convention on Early Notification of Nuclear Accidents	Vienna 1986	16th November 1994	16th December 1994
Protocol on the Application of the Convention on Civil Liability for Nuclear Damage	Vienna 1963	1992	30th November 1993
Joint Protocol Concerning the Application of the Vienna and Paris Conventions on Liability for Nuclear Damage	Vienna 1988	20th September 1993	20th December 1993

*insufficient or conflicting information

[1]None of the following associated protocols have been signed by the Lithuanian Government:

- on Long-Term Financing of the Co-operative Program for Monitoring and Evaluation of the Long Range Transmission of Air Pollution in Europe (EMEP) (Geneva, 1984).
- concerning the Control of Emissions of Nitrous Oxides or their Transboundary Fluxes (Sofia, 1988)
- on the Reduction of the Volatile Organic Compounds or their Transboundary Fluxes (Geneva, 1991)

Table 7.2 Environmental Conventions Lithuania Intends to Ratify

Convention		Date Acceded	Date Ratified
Convention on the International Trade in Endangered Species of Fauna and Flora (CITES)	Washington 1973	Not yet acceded to	
Convention on the Conservation of Migratory Species of Wild Animals	Bonn 1980	Not yet acceded to	
Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal	Basel 1989	Not yet acceded to	
Convention on Environmental Impact Assessment in a Transboundary Context	1991	Not yet acceded to	
Convention on Biological Diversity	Rio 1992	11th June 1992	Not yet ratified
Convention on the Transboundary Effects of Industrial Accidents	Helsinki 1992	18th March 1992	Not yet ratified
Convention on the Protection and Use of Transboundary Watercourses and International Lakes	Helsinki 1992	18th March 1992	Not yet ratified

Lithuania's desire to be readmitted into the international community via organisations such as the EU, UN, and NATO has been a driving force in signing international agreements on the environment. On one level, participation at the UNCED conference in Rio, 1992, demonstrated the Government's concern for environmental issues and an acknowledgement of Lithuania's role in the global environmental crisis. A commitment to sustainable development was also acknowledged through signing the Rio Declaration. However, on another level, the aim of participation could relate more to a concern for international acceptance than with a sincere commitment to environmental protection. Lithuania would not be alone in this reasoning. International pressure to conform achieves at least some measure of consensus on a wide range of international issues. For example, environmental groups can pressure the Government on the basis of their international commitments. However, it should be noted that Lithuania became a party to the Helsinki Convention on the protection of the Baltic Sea (see 3.2.3.2) in 1974 when under Soviet rule (Nørgaard and Pedersen 1994:104) yet it has been well established so far in this thesis that the Soviet Union did not portray a commitment to the environment nor take responsibility for the degradation which their policies created.

Implementing such commitments requires sufficient funding which is still not forthcoming, with economic depression as the alleged reason. Thus, while Lithuania's international commitments and national legislation indicate some support for environmental issues, they do not prove the hypothesis since funding has been inadequate and environmental legislation has typically been subject to unnecessary delays[6] Further, environmental NGO representatives have lamented that some small worthwhile and inexpensive proposals have been rejected by government (Vainius pers. comm., August 1996).

7.3.2.1 Lithuania's International Obligations

The signing of international agreements is significant considering that the combined membership cost (designed to fund the running of the various secretariats) is an extra burden on an already strained national budget. This indicates some measure of commitment, although the extent to which the government considers these obligations in decision-making is debateable.

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6. For example, the National Environmental Strategy was not ratified by Parliament for one year and EIA legislation has been in preparation since early 1994.

Peat extraction, for example, continues despite its impacts on important wetland species protected under the Ramsar Convention. Table 7.1 lists the agreements which are binding on Lithuania and Table 7.2 lists the conventions that Lithuania has signed but not ratified or that it intends to sign.

The *Convention on the Protection of the Marine Environment of the Baltic Sea Area 1974/1992* (Helsinki Convention) was signed by Lithuania in 1992. The Soviet Union was a party to the 1974 convention which came into force in 1980. The new convention of 1992 included new text and updated legal matters and was signed in 1994. There was no need to ratify the agreement. The Helsinki Convention encapsulates both the "precautionary principle", and the "polluter pays" principle. The discussion in Chapter 6 on domestic sources of funding for environmental protection shows that Lithuania has employed a polluter pays principle as the basis for their environmental management system. It is less clear that a precautionary principle is enlisted in development. The case study of the energy system in Lithuania, presented in Chapter 2, for example, demonstrates that a precautionary principle is not at the root of environmental decision-making since the proponents of the oil terminal at Butinge appear to have ignored the opportunity to apply a precautionary principle by opting for construction, despite environmental concerns and an alternative which would allay such concerns (see 2.3.1). The continued operation of Ignalina Nuclear Power Plant in spite of safety problems could be seen as another example of rejecting such principles of precaution (see 2.4.2).

There are also some problems with the conventions or their associated programmes which complicate the implementation of environmental aims. For example, the Environmental Action Programme, a requirement of the Helsinki Convention, (to which the EU is also a signatory) is a project guide for all Baltic countries and has been strongly criticised, primarily for its focus on free-market measures (see 5.4.2.1).

Becoming a party to international agreements is not, in itself, demonstrative of a commitment to environmental protection. For example, there are a number of limitations which have been outlined in 7.3.2.2 and 7.4.3.1 in this chapter and also in Chapter 3. Most such agreements are non-binding (an attractive feature for potential signatories) and must be ratified by parliament at the national level and be provided with the necessary infrastructure for their implementation through national laws. For example, although

Lithuania signed the *Convention on Biodiversity* at the UNCED 1992 world congress in Rio de Janeiro, it was still not ratified by parliament in 1995. As shown in Table 7.2, other agreements and protocols are also waiting ratification.

7.3.2.2 National Versus International Concerns

The EU is a special form of international cooperation because its common legislation has direct policy effects on the Member States and because it facilitates the pursuit of particular interests through collective action (Wallace 1981:115). Joining the EU (and the international community in general) will require cooperation between Lithuania and other Member States in many spheres, including the environment. Lithuania has already begun this process by becoming a signatory to various international conventions. However, there are limitations to effective cooperation that will need to be overcome if Lithuania is to be successful in its bid for inclusion. The strong national sentiment that pervades Lithuanian society could hinder successful implementation of international standards in the country. As acknowledged by the Lithuanian President, some autonomy would necessarily be transferred to the EU if Lithuania became a member:

> Community government coexists with national government but cannot be separated from it. It remains dependent on what politics within individual member states will permit. Yet the autonomy of national governments is circumscribed by their obligations to each other and by a shared commitment to preserve the common ground that has been established (Wallace 1981:113).

As mentioned previously, there has been a tendency for the Lithuanian decision-makers to justify projects as necessary for Lithuania's economic independence thereby giving economic development priority over local environmental issues and possible international commitments (in environmental protection or otherwise). Malgosia Fitzmaurice (1992:59) points out that nationalism can affect the legal implementation of international agreements:

> National sovereignty, and the assertion of national autonomy in the use of territory and of permanent sovereignty over resources, limit the possibilities of international regulation, enforcement and oversight.

It is clear that 50 years of Soviet occupation has had an impact on the thinking of Lithuania's decision-makers. For Lithuania, like Scotland and Northern Ireland, the existing nation state is the focus of political loyalty (Crouch &

Marquand 1990:ix). To have a strong national sentiment, while vying for inclusion in the European Community, is likely to have both economic and environmental consequences. The trend elsewhere has been away from the modern state system and toward a more pluralistic form with various levels of political authority. Thus, 'authority no longer rests as clearly as it used to upon the sovereign state, and there are other identities competing with the national one' (Joenniemi, *et al.*, 1992:3). Lithuania must also shake the traditional concept of a territorial state and take on board new approaches that transcend old formations, structures, and boundaries. Yet, national concerns are even more likely to remain given the rebirth of nationalism in various parts of the world (see 4.2.2).

The Baltic Cooperation Council aimed to facilitate cooperation and consisted only of Lithuania, Latvia, and Estonia. Annual prime ministerial summits are another avenue for cooperation between the countries. These meetings have increasingly resulted in stalemate on decisions regarding uniformity with economies, particularly the re-introduction of national currencies and negotiations with Russia. In June, 1993, Estonia pulled out of the Baltic Cooperation Council (BCC) which was set up in April, 1990, over a year before the Baltic states officially regained their independence from the Soviet Union. The executive of the Council was a standing commission consisting of two representatives from each country (Oll 1993). One of the Estonian representatives, Arvo Ukleika, believes that although it was once seen as an advantage to set up a 'Baltic common market', there are now major obstacles to effective cooperation. According to Ukleika, the problem lies in the fact that '[t]hey see one another as competitors rather than partners' (Quoted in Oll 1993). More recently, the three states have again tried to improve cooperation by forming a new Baltic Council.

The disappointing degree of success of the concept of a common market between Lithuania, Latvia, and Estonia, demonstrates the difficulty of achieving such a goal. Could Lithuania successfully participate in a European common market if unable to do so with its near neighbours? A free trade agreement between the EU and each of the three Baltic States was signed in 1994, effective from January 1, 1995. The signing between the Union and all three of the States followed months of negotiating regarding quotas, tariffs, and barriers, particularly in the area of agriculture (where the Union is most protectionist). Lithuania, with agriculture as a major sector of the economy, like Spain in 1985, could be waiting some time before gaining full EU

membership. Estimates of at least ten years have been reported. Resistance to Spain's membership was based on the probable upset of the equilibrium of the EC farm markets, thus, negotiations stretched for about six years (Story 1990:41). Although many of the trade barriers have been eased, the EU and EFTA 'maintain tight restrictions on the most competitive products from Central and Eastern Europe - products in which the region has a competitive edge' (BCSD 1994). Thus, imports to the region from Western Europe have been growing by around 30 per cent per year while exports have not been matched with tariffs set at 100 per cent or more on agricultural products (BCSD 1994).

The ongoing tension between Lithuania, Latvia, and Estonia, demonstrates the difficulty all three countries have in cooperating with regional neighbours. The resentment which can develop from a lack of control over the destiny of one's country, is not easily resolved. Not willing to trust Latvia (with a 40% Russian population) to co-operate on projects such as the combined oil terminal and refinery exchange, yet pleased to welcome financial support and investment from the West for similar ventures, clearly (yet understandably) shows a bias in foreign relations.

7.4 Legal and Institutional Framework for Environmental Policy

As noted in Chapter 1, history is an important backdrop or analytical framework within which an analysis of present policies needs to be discussed. Reference has been made throughout this thesis to the legacy of Soviet incorporation and the way this has shaped the political, cultural, economic, and environmental situation in Lithuania. It is, again, relevant here in understanding the present situation regarding environmental policy and legislation. Essentially, the influential features have been the institutionalised pattern of vested interest (industry and military power); the resource intensiveness, derived from a lack of concern for effective utilisation of resources and facilitated by economic incentives to meet production targets; and a closed hierarchical political system that essentially blocked any political activity not carried out in the name of the Party. Given these political characteristics, the emergence of "post-modern" (or "soft") political issues, such as the environment, were unlikely in the USSR. This legacy, together with 'the emergence of new political forces in the transition to a market economy and liberal democracy ... provides an arena within which any political issues in the Baltic States may be viewed' (Nørgaard and Pedersen 1994:101).

March 11, 1990 marked the beginning of legal reform in Lithuania when independence from the Soviet Union was declared. 'From this day, justice, not the will of the State [was] consolidated in law' (Zilgalvis *et al.* 1993:3). The dismantling of the Communist Party as the controlling institution should have led to a reduced role of the vested interests of industry and the military in decision-making. However, subsequent decentralisation of power has led to a kind of regional control pattern whereby regions within Lithuania compete to maintain their income base. Democratisation creates possibilities for horizontally organised groups such as green organisations to mobilise public opinion and thereby influence the decision-making process but it does not guarantee a commitment to environmentally sensitive decisions. Nor does transferring power to local authorities (Nørgaard and Pedersen 1994:102). While decentralisation and local democracy open the way to affect policy, it does not necessarily follow that decisions will be ecologically sustainable. For example, a local community might perceive that their income base is threatened by possible closure of a polluting factory. In this way, democratisation and the transition to a market economy are not necessarily the only changes required for environmental rehabilitation and protection in Lithuania. Thus, while it is the cornerstone of Green political thought, participatory democracy incorporating a panoply of views cannot, in itself, guarantee an environmentally sustainable society (see also 7.2.1).

The enormous task of restructuring the legal system has also been an important aspect of transition. Along with increasing public awareness and education, legal and institutional measures in planning (particularly in EIA) have been recognised in the *National Environment Strategy* (NES) as the most important goals of medium and short-term projects (MEP 1995b, Section 6:47) (see also 7.4.2). The legal framework is an integral part of ensuring an environmentally sustainable society. Like democracy, legal reform does not, in itself, guarantee environmental protection in Lithuania. However, it is a necessary and indispensable factor in moving toward such a situation. Environmental protection laws can provide a basis for control and monitoring of activities which impact on the environment as well as provide a basis for public scrutiny. While environmental law reform was a priority when independence was restored, it is now proceeding largely on momentum (Stec 1995:88). Rather than work in a legal vacuum, legislators extended the validity of soviet laws while new laws were drafted (Nørgaard and Pedersen 1994:107).

The possibility of Lithuania leaping ahead of the West in terms of

environmental protection was noted by French (1990:40-1) who pointed to the years of experience, particularly in policy development and technology, which could be drawn upon in the process of reform. While, in some aspects Lithuania has been able to do this by preparing laws and a pollution control infrastructure, the administrative system has been limited in its capacity to deal with the sheer deluge of legislation requiring to be formed or changed. In addition, it has not been designed to cope with its new tasks as outlined in the legislation. For example, one of the failings of the permits and charges system is the difficulty of implementation and enforcement (see 6.3.1.2).

While decentralisation may have removed some influence of traditional soviet vested interests, other forces, such as heavy industry, new business, and foreign investors, are also mobilised by the process of democratisation. Such interests are usually well organised and have substantial financial resources at their disposal. This influence may counteract input from new political parties and non-government organisations. The political system, then, may still be restrictive to participation of NGOs which are typically less powerful (see 7.4.1.3).

7.4.1 Environmental Legislation in Lithuania

Environmental law has not, as yet developed into a separate branch, however the adoption of the *Law on Environmental Protection of the Republic of Lithuania 1992* (LEP) and its related laws[7] formed the foundation for the national environmental policy which has culminated in the development of the *National Environment Strategy* in 1995. The more recent drafting of other environmental laws discussed below contribute to the first stage of environmental law reform in Lithuania (Zilgalvis *et al.* 1993:14-15). The formation of the LEP and the various pollution taxation laws that accompany it, might suggest some measure of priority by the government. A national strategy might also indicate that environmental protection is a priority. However, implementation is the key to understanding the true priority given to such a policies. For example, the Law might not receive adequate funding or infrastructure support for its implementation. Chapter 6 highlighted the economic priorities of the Government and international donors which has left the environment sector relatively underfunded. Where finance has been provided, it has generally been directed toward waste water treatment,

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[7] See Supreme Council of Lithuania 1991a, 1991b, 1991c, 1992b.

effectively ignoring other issues. Another example of establishing commitment or priority to environmental problems is in the case of conflicting policies - forestry verses conservation of natural areas, for example - where priority might be given to the former. Although the economic situation is a limitation to successful implementation, there are a number of measures which could be taken at relatively low cost, and determination to fulfil the policy would uncover such measures.

The LEP is essentially a framework law, determining the structure of environmental management, rights and duties of citizens, natural resource management, regulation of economic activities including permitting, monitoring, and enforcement of standards and application of penalties (Vainius 1995:91). Aside from general statements about the rights of citizens to a healthy environment and the connection between society and nature, the LEP relies heavily on pollution control measures. It also calls for the harmonising of standards with those of the EU (Stec 1995:104). Chapter 8 of the LEP deals with international cooperation and includes very broad statements concerning international agreements and global obligations in environmental protection (Supreme Council 1992b:17). There are also broad provisions for public participation but, as noted by Stec (1995:87), such broad statements are impractical when it comes to participation on the ground level.

The generality of the law may be attributed to the fact that it was prepared hurriedly at a time of significant upheaval. At the time, a law on environment was a priority of reform. Legal reform in all areas has since slowed in pace as analysis and debates take place over their contents. As the new, and more specific, laws are enacted, a more stable base for environmental protection becomes possible. A commitment to ensuring environmental rehabilitation and protection would see such laws ratified more quickly. The EIA legislation, for example, involved several years of drafting before being completed in Autumn 1996. The articles of LEP relating to the regulation of economic activity set out in Chapter 4 of the LEP, stipulate that developers must prepare an EIA and present it to the Department of Environmental Protection (now Ministry) for evaluation and for a 'motivated conclusion' (see 7.4.1.3).

Despite its problems, the LEP is sill the most important environment law for public participation and scrutiny of environmental decision-making because it provides for all interested parties. In fact, Vainius (1995:89), points

out that the generality of the rights expressed in the law can actually be useful. Environmental NGOs in Lithuania use the LEP and refer to it when writing letters, comments, statements, or complaints, thus reminding Government and the public of their obligations to protect the environment under law (Vainius 1995:91).

7.4.1.1 Nature Protection

Most of the general principles relating to the protection of flora and fauna and their habitats are found in the Constitution and the LEP. There are more specific regulations regarding the management and protection of fauna in the *Law on Fauna Protection and Use 1987*. The use and protection of flora is not covered by a single Act but by ordinances such as the *Forest Code of 1979*, the *Law on Protected Areas 1993* and the *Regulations on the Red Data Book 1990*. All wild fauna is considered to be the property of the state but flora can be the property of the state or of private individuals. The status of some species of flora and fauna is critical. Around five hundred species (210 plant species, 210 animal species, and 81 species of mushrooms) are considered vulnerable. A further 120 species are endangered while 34 species are already extinct (Zilgalvis *et al*. 1993:29). All activities which threaten the extinction of rare or endangered animals and plants or that have a negative impact on their habitat are prohibited. This is a difficult regulation to uphold, given the difficulty faced by officers with poaching in reserved areas while many threatened species are not well represented by the reserve system. Earth disturbance from mushroom gathering has been particularly destructive to local forests.

7.4.1.2 Protected Areas Network

The system of protected areas had its beginnings in the Krushchev period in the 1950s and 1960s and was later reworked by prominent geographer, Paulius Kavaliauskas in 1992. The management of protected areas is now covered by the *Law on Protected Areas 1993*. The system, or framework, represents an interrelated system of zones aimed at protecting ecological processes and the neutralising the effects of human impact on the natural environment (Kavaliauskas 1995:102). It establishes five categories of protection (see Figure 7.1). There are four Strict Nature Reserves (IUCN category I) in which most human activity is prohibited. It is forbidden to hunt, fish, utilise natural resources, change the hydrological regime of the land, pollute the water, use

chemicals, construct buildings, build roads, or undertake activities which result in a negative impact on flora or fauna within a Strict Nature Reserve. All human presence in the territory of Strict Nature Reserves is forbidden without the permission of the MEP. Another category of reserve is the 'Protected Zone' which is usually used as a buffer to Strict Reserves and within which many activities are also restricted including hunting and clear cutting of trees (Zilgalvis *et al.* 1993:36).

Figure 7.1 Lithuania's Protected Areas

The oldest form of protecting areas is the National Park where the boundaries are determined and administered by the Government. There are four National Parks (IUCN category II) and one Historic National Park (Trakai - IUCN category V). There are restrictions on human activity within Lithuanian National Parks, however there are no heavy restrictions on recreational

activity, fishing or hunting (excepting hoofed animals). Within National Parks, a number of zones have been developed such as; conservation, protection, recreational, and industrial zones where particular land-use conditions apply. Any economic activity carried out in the afforested areas of National parks is conducted according to the Forest Management Regulations for Protected Areas and is approved by the Ministry of Forestry in conjunction with the MEP. There are 30 Regional Parks, including one Historic Regional Park which have a protection level equivalent to IUCN category V. Nature Conservation Reserves form another category which are established for the protection of areas significant to natural and cultural heritage by regulation of economic and recreational activity (IUCN category IV) (Zilgalvis *et al*. 1993:37, Kavaliauskas 1995:105). There are approximately 350 Conservation Reserves of varying types. Common to all protected areas is a prohibition on urban and industrial development (Kavaliauskas 1995:105).

The protected areas account for 11.2 per cent of Lithuania's territory thus providing a significant contribution to environmental protection in the country. The main criticism of the framework is that it has been devised on a geographical basis, ignoring the importance of natural diversity and leading to the protection of certain areas whilst arguably more important areas remain unreserved. The parks are also underfunded and understaffed which is evidenced by the fact that poaching continues to be the major problem faced by Park officials despite the fact that it is prohibited or restricted in many protected areas. Rangers have lamented that it is nearly impossible to control poaching without appropriate resources (pers. comm., July 1996). Contributing to the problem is the lobbying power of the hunting fraternity of which previous Environmental Ministers have been a part.

7.4.1.3 Environmental Impact Assessment (EIA) Legislation

Despite the significant environmental problems in Lithuania, there is still much that remains to be protected. As Duncan Fisher has argued (referring to the CEE and Baltics region); 'if environmental resources can be valued in an appropriate manner - ...ultimately a function of politics - EIA may become a valuable tool for the integration of environmental protection into economic development' (Fisher for EBRD 1994:xi).

While the EIA law was being finalised (it had been in preparation for around 4 years), details of EIA procedures could be found scattered throughout various

normative and regulative acts. The main source were Articles 15-18 of the LEP which stipulates that those applying for a permit to engage in economic activity must, at their own expense, prepare and submit documentation about the probable impact of their proposal to the appropriate regional office of MEP or to the Ministry itself for major industrial projects. (Zilgalvis *et al.* 1993:26-28). The new EIA legislation was approved by Parliament in Autumn, 1996 (Linas Vainius pers. comm., February 1997).

For EIA legislation to be successful in Lithuania the general resistance to planning and controls must be overcome (Fisher for EBRD 1994:xii). As mentioned in Chapter 4, national sentiment is at times a hindrance to successful implementation of environmental policy. The antagonism toward policies of regulation on the new path to the free market could also affect the successful working of legislation designed to control economic activity.

There is, on the other hand, a growing acceptance of EIA in the West as an important feature of planning for establishing potential impacts of projects both individually and collectively (Fisher for EBRD 1994:xii). However, this understanding of the value of EIA is not matched by successful implementation in the West. While EIA is designed to anticipate problems of construction and/or operation of a proposed facility in order to prevent or reduce potential environmental impacts, the process often begins late in EU countries making it unclear how the EIA is integrated into the project plan. Other problems include inconsistent quality (including unclear methodologies and the exclusion of certain alternatives), and inadequate facilitation of public participation (Fisher for EBRD 1994:xiv). According to Fisher, there is no evidence that similar problems will not also appear in the CEE and Baltic region.

At a conference held by the Stockholm Environment Institute Tallinn branch (SEI-Tallinn) it was alleged that recent constructions of oil terminals on the Baltic Sea coast were a serious threat to marine life due to inadequate technology, poor EIA procedures, and a lack of co-ordinated policies of the Russian Federation, Lithuania, Latvia, and Estonia. The construction of several of these terminals has not conformed with the recommendations of the Helsinki Convention to which all those countries are signatories (Trummel 1994). In 1994, construction on two oil terminals in Estonia was halted by the Ministry of Environmental Protection because obligatory environmental assessments and permits had not been obtained (Oll 1994:2).

The construction of the oil terminal near the coastal town of Butinge, close to the Latvian border will be a test that all procedures are followed correctly. The struggling economy is a hindrance on compliance of such procedures, as is the lack of tradition in EIA preparation, analysis, and enforcement.[8] The recent intensive construction of terminals on the Baltic coast stems from a general panic following the "blockades" on Russian supplies of oil and gas, leaving the countries determined to obtain access to other sources (see also 2.3).

A well defined EIA procedure which includes public participation and legal recourse is, therefore, an important facet of a code of environmental protection. Fisher (1994) argues that the administration needs to be flexible with public consultation being a key factor. Unfortunately,

> the lack of experience on the part of both the public and the administration in mutual consultation, and the inherited perception of the planning process as a technical analysis rather than a process of negotiation, will make the task of ensuring effective public participation exceptionally difficult. In addition, the lack of a scoping process often results in argument about the scope of the EIA when it is too late to introduce new issues into the EIA process (Fisher for EBRD 1994:xv) (Further limitations to implementation of environmental policy in general are discussed below in section 7.4.4.1).

There is no formal mechanism for public participation in the EIA process in Lithuania aside from the general right of the public to access information before the conclusion of the EIA (EBRD 1994:133) (unless it is considered a state secret). There is no public access to the details of issued permits and no legal requirement for public comment on either draft or final permits. There is also no system of public appeal but a proponent may appeal against decisions made regarding whether a proposed activity requires an EIA (Article 3(f)). In practice, individuals or groups can only consider the conclusions of an EIA (Vainius 1995:91, Zilgalvis *et al.* 1993:28, and Bissett 1994). However, the LEP states that it is possible to demand the EIA or other information relating to a proposed activity (Zilgalvis *et al.* 1993:28). As discussed in 7.2.2.3, such participation is not only a crucial part of democratic society but also integral to environmental sustainability. Public participation in the EIA process helps ensure some measure of accountability on the part of developers and the government who have a financial interest in promoting development.

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[8] The apparent disregard of the EU directive on EIA as referred to by Wright & Shorey 1994, is also of concern, however, the EU does have a well developed procedure and understanding of EIA. The enforcement of such directives obviously remains a problem but there is no reason for the new members to ignore the procedures in place.

According to the LEP, information on environmental impacts should be provided by the MEP with public participation possible after the Ministry has given an opinion on the EIA followed by consultations with the developer regarding views of the Ministry and the public. It is the Ministry of Economy or the city government which then issues a decision on the project (EBRD 1994:133).

7.4.1.4 Agricultural Policy and Land Reform

Agriculture has, historically, been a major component of Lithuanian society. In 1920, 79 per cent of the population were engaged in agriculture (Lieven 1993:62). After land reform in 1920, Lithuania developed potential for successful wheat, dairy, and cattle farming of the Scandinavian type and capitalist smallholdings became very successful in the 1930s (Hope 1994:44-6). Yet, agriculture has also been a significant contributor to environmental degradation in Lithuania, particularly to water pollution. The Soviet rule transformed Lithuanian agriculture into a mass of collective farms centrally controlled and funded. Again, production targets dominated farming practices as they did in industrial production. As a result, large quantities of fertilisers and pesticides were distributed for use among farmers, ignoring the financial and environmental burden of such practices.

The agricultural sector has been hard hit by the transition and associated land reform. Agricultural production has declined significantly (up to 60%) and this has been complicated by the land ownership changes. In particular, restitution of land owned prior to Soviet rule and the breaking up of collective farms have led to tensions in the rural community, especially through increased unemployment. In addition, the land reform process has consumed most of the institutional capacity at the local level, thereby severely limiting the capacity of municipal environmental agencies to engage in other environmental protection tasks to be assigned in the process of decentralisation (Eckerberg and Pedersen 1997 and Applegren 1994:1-2).

As at January 1994, over 118 thousand claims for restoration of agricultural land had been processed with a further 300 thousand still to be reviewed (Budvytiene *et al*. 1995:82). By October 1996, the number of processed claims had increased to 268 thousand constituting 1.4 million hectares of land with a further 400 thousand claims registered with the authorities (ELTA October 24, 1996). The main impact of the intensive land reform has been the

distribution of land tenure. The number of private family farms is increasing rapidly and these, together with the small private plots, are providing growing competition for the remaining larger state farms. An increase in livestock and crop concentration in these smaller farms (particularly those with poor quality soil) creates additional problems relating to waste management, chemical storage and use, water management (quantity and quality), and ground water contamination (Budvytiene *et al.* 1995:72-82 and Applegren 1994:1, 18).

It is foreseeable that, if the increase in smaller farms continues, a corresponding increase in the use of chemicals will emerge in response to a growing need to improve production and increase soil productivity (Budvytiene *et al.* 1995:72). Yet, as in the industrial sector where economic decline meant less pollution, economic adversity has decreased the impact of agricultural chemicals on the environment. For example, the use of fertilisers decreased from around 700 thousand tons in 1988 to 600 thousand in 1991 and 145 thousand in 1992. In the same period, pesticide use decreased by approximately 90 per cent. This has been primarily due to price reform which has led to dramatic increases in input costs (Budvytiene *et al.* 1995:83-5). Therefore, agricultural policy needs to be prepared for the likely increase.

The economic decline, and subsequent decrease in the use of mineral fertilisers, provided Lithuania with a unique opportunity to allow the rivers and ground water to recover somewhat. This provided time for environmental legislation to be enacted. However, secondary pollution problems have meant that the quality has not improved greatly (MEP 1995a:37) and for any benefits to remain, agricultural pollution needs to be strictly monitored. Maintaining the benefits of reduced pesticide use is complicated by the fact that the licensing of pesticide use and the quality control of pesticides are carried out by the same agency (Applegren 1994:19). Pesticide use had already begun to increase again in 1993.

Ecologically sustainable agriculture is an essential facet of an overall ecologically sustainable pattern of development since it would have implications for both the economy and the environment in Lithuania. However, the political situation may not be conducive to an environmentally sensitive agricultural policy. Agriculture remains fundamental to the Lithuanian economy (25 per cent of GDP in 1993) and production will again be important as Lithuania aims for inclusion in the EU. Budvytiene *et al.*

(1995:70) point to the need for environmental education among the rural community since they often do not perceive the environmental consequences of their farming practices. Although, once again, such strategies require commitment and funding from government agencies. Applegren (1994:18) suggests that state subsidies to farmers be replaced with effective management mechanisms which would assist in efficient use of resources.

In all land use laws, such as the *Law on Land Reform*, there are environmental protection requirements. They also provide the best avenues for public participation and could, theoretically be used by concerned citizens or NGOs to protest about changes which have a direct or indirect impact on the environment. However, it is quite difficult in practice, since land reform (or more specifically, the return of land to pre-Soviet owners) is a sensitive processes of economic reform in Lithuania. These laws and regulations are often altered by the authorities which further complicates any process of participation since even professional lawyers are uncertain of current rules (Vainius 1995:92).

EU membership would also have implications for agricultural policy. The EU's common policy on agriculture, while successful in the early stages, has now been plagued by over-production, falling prices, pollution of ground water, soil degradation, a dependency on fodder imports, and the spread of diseases such as Salmonella, Mad Cow disease, and the potato virus. The Norwegian Society for the Protection of Nature (1994:6) used such arguments in their opposition to membership, pointing out that they had been spared such problems because of their restrictions on the importation of food.

7.4.1.5 Other Related Laws

As an overarching legal framework, the constitution is the most supreme legal document stipulating rights and duties of citizens in Lithuania. These are, necessarily, stipulated in fairly broad terms and generally have the function of a baseline for other laws and regulations put before the parliament. The constitution does not acknowledge a "right to a healthy environment", however, citizens and government are obliged to concern themselves with environmental protection[9]. The *Law on Environmental Protection 1992* is

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9. There are very few constitutions which do acknowledge such a right, although there is a trend emerging in human rights law toward establishing a human right to a healthy environment (see Banks and Sainsbury 1997).

based on the right to a healthy environment. Many of the other basic human rights set out in the *Universal Declaration on Human Rights* which are important for participation in environmental decision-making are also found in the Lithuanian Constitution such as the rights to information, free assembly, association, and petition. In possible conflict with these are property rights and personal freedoms. The Constitution also provides for the sovereignty of the people and establishes parliamentary controllers (ombudspersons) for independent examination of complaints regarding the abuse of official powers. Article 54 of the Constitution also states that the 'pollution of waters and air, the production of radioactive impact, as well as the impoverishment of fauna and flora, shall be prohibited by law' (Supreme Council of Lithuania 1992b). Although the permits and charges system described in Chapter 6 is evidence of an attempt to enforce such a statement, clearly, in practice, such impacts are not prohibited as such since by applying the "polluter pays" principle, a permit can be bought to undertake activities which pollute air and water. Further, it could be argued that the Ignalina Nuclear Power Plant is unconstitutional since there is a radioactive impact associated with its operation. However, the Constitution is not likely to be used in protest against environmentally destructive activities.

The LEP includes a general statement that violators of the law may be subject to criminal liability. Conversely, the Criminal Code allows for criminal liability in cases of intentional or grossly negligent conduct resulting in environmental harm, however no criminal cases have, as yet, been brought against such activities (Stec 1995:112). The Civil Code also includes provisions relating to compensation for damages in cases of environmental harm. The LEP is somewhat more specific (in Articles 32 to 34) stating that a violator is legally required to compensate all losses and, if possible, restore the environment to its previous state. Those who have been affected have the right to make a claim for damages (Stec 1995:113).

Other protective laws in the process of drafting include forests, waste management, biodiversity, soil protection, coastal areas and the continental shelf, water, air, and special measures to control pollution of the Baltic Sea. Applegren (1994:23) recommends that a water management policy should include a balance between state controlled management and economic incentives such as water use and pollution taxes, penalties, and charges. It could include positive incentive such as grants for improvements or tax exemptions. Ongoing monitoring would also be important in order to register

changes and trends. He also recommends the construction of small scale treatment plants for rural communities and private enterprises. In order to coordinate such measures and to improve effectiveness, Applegren (1994:24) suggests that an inter-ministerial committee be established including the Environmental Protection, Agriculture, Health, Urban Planning, and Industry ministries.

7.4.1.6 Environmental Guidelines for Investors

Environmental guidelines were developed for potential investors in Lithuania in 1993 with funding from the EBRD and the Development and the Commission of the European Communities. They provide an overview of the administrative structure, government bodies, environmental legislation, environmental audits, EIA, land use planning, water, air, and noise pollution standards, and waste management regulations. The guidelines focus 'specifically on those compliance, operational and liability issues which arise from environmental protection measures and affect investments' (Environmental Resources Limited (ERL) 1993:1).

The development of such guidelines suggests a measure of responsibility on the part of the government in promoting good environmental practice for investors. However, the EIA process, problems with enforcement of penalties and charges relating to emissions, and an overall desire to promote large foreign investment possibly counteract any benefits to be achieved by such a document.

7.4.2 National Environment Strategy (NES)

By developing priority Action Programmes, the NES aims

> to strengthen Lithuania's institutional capacity to address its existing environmental concerns and problems effectively, and to ensure that the concept of environmentally sustainable development underpins Lithuania's transition to a free market economy (MEP 1995b: Ch. 1:2-3).

The strategy was funded by the PHARE programme and prepared by a consortium of consultants from Ireland (International Development Ireland and DEVCO Ireland) and England (Environmental Resources Management). The final report was published in October 1995 and ratified by Parliament one year later (MEP 1995b:i and *ELTA*, September 25 1996). The delay in parliamentary approval of the strategy was considered by those working in

the environmental sector (government and NGOs alike) to be indicative of the low priority of environmental issues across the political spectrum. In the opinion of those working in the field of environmental protection, the report has little practical relevance (Vainius, L. and Greimas, E., pers. comm. July, 1996). The acceptance came just one month before the national elections and is one among many LDDP initiatives to be hurriedly concluded before the election. It may be that the Government considered it would attract votes and, in such a way, represents one of the few attempts to include environmental issues on the election agenda. On the other hand, it may have been a political stunt to accrue achievements and make changes more difficult for the possible new government.

Several important benefits could be achieved through the adoption and implementation of the NES. It offers a comprehensive overview of short and medium term priorities for the optimal use of financial resources, thereby 'providing a basis for the implementation of consistent national environmental policy' (MEP 1995b, Section 1:4). The strategy also aims to provide closer integration of environmental concerns and major economic activity in the country. Such a strategy will be useful for environmental agencies, particularly in directing donor investments into priority areas. Its success, however, rests with adequate funding and infrastructure for its implementation

7.4.2.1 Positive and Negative Factors Affecting NES Implementation

The NES acknowledges several 'negative factors and obstacles which may impact adversely on the implementation of the medium and short-term action programme' (MEP 1995b, Section 6:47). These include: a lack of legal and territorial planning documents; frequent breaches of the laws and regulations which are in place; a non-rational approach to land reform which is not balanced from either a management or ecological perspective; a generally short-sighted economic, technocratic, exploitative, and predatory approach to nature and the decisions regarding it; a lack of qualified specialists; a current national culture which gives a low priority to nature protection; and insufficient concern and funding for the protection of biodiversity (MEP 1995b, Section 6:48). Many of these problems have been addressed in this thesis as obstacles not only to implementation of environmental policy but to the development of environmentally sustainable society.

7.4.3 Implementing Environmental Policies and Legislation

A prerequisite for successful implementation of policy is that rules are clearly formulated. Compliance is less likely if the rules are vague. If they are vague, it could be a reflection of the priority of environmental protection as compared with other issues or the low cost for violations[10] (Adréasson-Gren *et al.*, 1992:6).

> 'It can not be assumed that policies will work; decisions run into unanticipated problems during implementation. Further, there are problems conducting an 'objective' assessment of a policy once it is operating (Davis *et al.*, 1988:126).

Crucial to any attempts at successful implementation and its assessment is the policing of the rules and regulations. For example, the Soviet system had some of the toughest emission standards in the world, on a par with the US Clean Air Act, but did not enforce them effectively (Bogert 1990:17 & Adamkus in Drunga 1989:28). Lithuania now has new environmental legislation but, as identified in Chapter 6, still has difficulties with implementation and enforcement. The major problems with implementation are a lack of finance and organisational structures while enforcement is limited by the standard of records, measuring instruments, and avoidance of penalties. According to the recommendations of the World Bank, there needs to be a transition from,

> a system in which environmental laws represent a statement of goals to a system in which those laws provide operative requirements for the control of potential sources of environmental risk (World Bank, 1993:280).

Implementation is even more difficult at an international level, especially when it concerns common property. One hindrance is countries' unwillingness to admit responsibility for pollution. Binding agreements between countries are the major legal source for environmental improvement and protection. These international conventions, including those applicable to the Baltic Sea, need to be implemented at the national level to be successful. For example, the Lithuanian Fund for Nature (1995:3) note that despite becoming a signatory to agreements such as the Bern, Ramsar, and Helsinki Conventions (all of which relate to the preservation of wetlands as wildlife habitat), official Lithuanian Government programmes do not follow the

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[10] 'The expected cost is the probability of detection multiplied by the size of the fine.... When the probability of detection is very low, the expected cost of violation is low even if the fine is high.' (Andréasson-Gren et al. 1992:6).

principles outlined whilst they have continued to pursue exploitation of wetland resources (see also 3.1).

7.4.3.1 Limitations the Environmental Policy Process

It has been demonstrated in previous chapters that poor economic conditions and national sentiment are major limitations to the priority given to environmental concerns because they influence the formation of environmental policy, obstruct balanced argument in the case of conflicting interests, and hinder implementation of environmental guidelines. Malgosia Fitzmaurice (1992:59) notes the obstacle of nationalism in regard to legal implementation and argues that, in the main, the control of pollution on common property (such as the Baltic Sea) is legally more complicated, especially regarding land-based sources which are more difficult to pin-point.

Political instability in the region usually leads to short term programmes and investment since opportunities are perceived as precarious (Fisher 1992). This has implications for environmental investment since much of it requires long term support. The existing administrative structures are unable to cope with the sheer deluge of new legislation as well as its expectations and requirements. For example, the system is not equipped to deal with practical requirements such as monitoring and the collection of fines as well as developing the avenues for participation provided for in the legislation (Fisher 1992), part of which is the issue of inadequate human resources. The inherited administrative and legal structures tend to operate on a sector-orientated basis with laws specific to relevant agencies and which generally have the purpose of providing legal authority to existing activities (Applegren 1994:3). The inter-ministerial approach (mentioned in 7.4.1.5) would go some way toward coordinating and consolidating the activities of different ministries and agencies in environmental management.

Aside from the oft-stated problems of economic transition, there are 'barriers of the mind' which represent a greater hurdle for industry and Government to overcome. Arbaciauskas (1997) refers to several such barriers which he considers need to be addressed before the more minor economic issues. These include; a lack of knowledge and information, an uncertainty about the future, inefficient working patterns, a lack of motivation, a lack of environmental commitment, and a conservative attitude toward the changes. He also stresses the structural and organisational barriers which add to the

problem of implementing environmental policies in general and within companies in particular (Arbaciauskas 1997).

7.5 **Conclusion**

The previous sections have highlighted the complexity of the transition from a planned economy to a market democracy, particularly in relation to political culture. The capacity of interest groups to effect change is, therefore, limited. However, it should be reiterated that democracy, and the package of rights that entails, is an essential component of an environmentally aware society in which environmental issues are given high priority. But it does not guarantee such perceptions. While the political change was essential and fundamental to environmental policy, the transition to democracy is only one aspect of ensuring an ecologically sustainable society. Likewise the development of various environmental laws is an important facet of environmentally sustainable society. There are some positive aspects to the legal reform in Lithuania which, if fostered, could provide more strength to legal norms in the future. However, without a commitment to their implementation via adequate funding and monitoring personnel, the legislation will have little practical relevance especially if ongoing problems of corruption and economically and politically motivated "short-cuts" for economic developers continue.

Chapter 8: Environmentally Sustainable Society in Lithuania?

The environmental perspective of this thesis is part of a multidisciplinary approach which highlights the interrelationships in Lithuanian society, in particular the links between politics, economic, and the environment and their implications for social justice.

The thesis covers social, political, and economic theory, also it provides case studies, analysis of fiscal measures of environmental protection, a discussion of historical and recent events, and an overview of legal reform and obstacles to its implementation. Given that a thesis could have been dedicated to any one of the areas, it does not claim to be an exhaustive account of theory and practice in each area. In particular, analyses of social movement theory and economic policy in Lithuania are rather cursory. It does however, provide a holistic picture - a snapshot - of Lithuania at a time of extreme political, economic, and social upheaval and the way in which these changes have affected the environment. Because of the dramatic changes being undertaken in the country, these interrelationships are more apparent. The connection between environment and economy is reflected in the fluctuating pollution levels associated with economic decline and the beginnings of economic recovery. The former, for example, led to a decrease in industrial pollution and in the use of chemicals for agriculture, while economic recovery has already begun to reverse this trend. The decline in Green membership and support also had a more noticeable effect in Lithuania than in other countries experiencing a similar trend. In Australia, for example, declining membership in Green organisations has not had an obvious impact on environmental awareness or government priorities. In Lithuania, where the environmental movement secured mass support across political, religious, and ideological (and to some extent cultural or ethnic) divides, the decline in its support and in the public visibility of its activities had a greater impact on the development of environmental policy than in Australia.

Analysis of the most recent events in Lithuania are generally tentative and most certainly risky, given the rapid changes taking place. The thesis' analysis of such events might, in time, prove to be incorrect. The emphasis is on change and the positive and negative impacts of change on Lithuanian society.

There have indeed been many changes in Lithuania; even during the

preparation of this thesis. For example, there have been two national elections in which control has been exchanged from the *Sajudis*-led camp to the LDDP (or post-communist camp) with a return to the post-*Sajudis* camp (Homeland Union) in 1996. The movement toward a free market economy led to extremely high inflation which has since been reduced (from 1160 per cent to around 37 per cent). The free market economy has resulted in the establishment of electronic supermarkets on many street corners while two MacDonalds have been opened in Vilnius. Many petrol companies have become well established, new cars, mobile telephones, and brief cases are part of the city scene. Abundancy replaces the long queues of 1991/2 and shops with near-empty shelves. Cigarette companies, Levis, Coca-cola, Heinekin, Beneton, and Snickers have rapidly become household names. All of this seems to have signalled Lithuania's enlistment into the family of Europe. The problem with such developments is, primarily, that so much of the population is still unable to buy the imported products on offer, and that much could be produced in Lithuania. Further, there is little infrastructure in place to cope with the dramatic increase of solid waste levels caused by the influx of Western products.

The thesis seeks to uncover whether expectations for the creation of an environmentally progressive society in Lithuania were misplaced. These expectations stemmed from the mass support for environmental issues in the 1988-1991 period. In addition, the changes necessary to establish such a society were thought possible due to the fact that the country was already experiencing major upheavals in all spheres of society. There was also an opening for the environmental knowledge, technology, and understanding of the West's 30 years experience.

An environmentally sustainable society is not merely one in which the environment is protected. It involves acknowledging the links between various problems in society and integrating economic, environmental, and social policies for their resolution. It encompasses an open, pluralistic society in which the environment is not degraded for the economic gain of a few, and with particular regard for future generations. Banks (1991) and Kritkausky (1995) both discussed the possibility of integrating economic development and environmental protection issues. This thesis has shown that such a society did not emerge from the demise of communism and the subsequent restoration of Lithuanian independence. This is due to economic adversity and the associated aspirations to improve the economy and join the EU, limited administrative and legal structures which have been overloaded by

the deluge of reforms, strong national identity, a lack of a political culture and general political apathy, as well as the already apparent decline of environmental concern and activism.

The prediction that Lithuania would lead the way toward an environmentally sustainable society has not been realised after six years of independence. When consideration is given to the difficulties in the West to achieve such an aim weighed against Lithuania's additional problems of corruption, maladministration, economic depression, high pollution levels, unsafe nuclear reactors, and other discussed problems, it seems unlikely that the aim can be achieved in the future. However, the situation was, and still is, complex. With the many interrelated issues that this thesis portrays, mono-causal links and straightforward arguments are not suitable to the situation.

For example, strong national identity has some positive implications for environmental protection because of the affinity it engenders with the territory and a desire to protect it from outside influence. Yet national sentiment can also have a negative impact by engendering insular, uncooperative behaviour as in the case of the oil terminal. Thus, it can be an obstacle to regional cooperation which could have both economic and environmental benefits, especially in the energy sector. However, regional cooperation is not the same as large regional blocs, such as the EU, which, as Lang and Hines (1993) point out are unable to adequately consider issues of environment and social justice. The distance between people and power tends to be widened under such unions of states, as many decisions are made geographically and linguistically apart from those they affect. Regional cooperation on a smaller scale holds greater possibilities for sustainability.

Economic development can have positive effects by creating an economic base for funding protection programmes but the development of the economy without consideration of the environment can lead to both environmental and economic problems in the long term. Economic reform was also important in that it broke away from the economic inefficiency of the Soviet model in which no consideration was given to the cost of resources in the push to meet production targets. The free market, capitalist system that has replaced it does not have a good record of including environmental impacts in economic equations, yet some moves toward costing (at least as an externality) have begun. The transition itself, has had some positive effects for the environment but this has had more to do with the decline in economic activity than with a redirection of priorities by the new governments. But

the transition, involving the pursuit of economic goals and the relative negligence of environmental issues, has also led to environmental impacts such as those associated with the oil terminal at Butinge, along with deforestation and wetlands drainage for economic development.

International assistance has been an important feature of environmental rehabilitation and protection in Lithuania but there are problems with both the motives of donors and the impacts created by projects. Most assistance has been directed at fostering economic development, causing further problems for the local environment. Thus, while international cooperation is an essential part of environmental protection, particularly in areas affected by transboundary pollution, pressure from the international community can be an obstacle to aspirations for the development of an environmentally sustainable society. The "watchdog" role of countries which are signatories to the same environmental conventions and treaties can also be positive in terms of the environment, however the pressures of free trade and other economic agreements largely preclude any attempts by individual countries to give priority to environmental concerns. In the main, international pressure, economic growth and free trade are a greater hindrance to environmentally progressive measures than they are a prerequisite for their implementation (see Chapters 5-7). The power and influence of the EU are especially obstructive to the notion of an environmentally sustainable society in Lithuania. As Lieven (1993:332) points out:

> Aid and political support from the EC are highly useful, but its trade barriers, and particularly the Common Agricultural Policy, are a curse for the Balts as for the rest of Europe.

There are also advantages of adopting EU standards, at least as a beginning. The harmonisation of laws and the commitment to free trade does, however, restrict member states from progressing above the norms of protection.

There is evidence that democratic values existed in Lithuania at the time independence was restored, providing some hope for the future of democratic processes in which the public could be involved in environmental decision-making. However, it has been shown that there are obstacles to the development of a democratic political culture such as the general population's lack of understanding of rights and obligations, a low tolerance for opposing political values, a continuing legacy of secrecy and corruption, and limited legal facilitation of avenues for participation. Further, the rights and duties bestowed on citizens can be in conflict with environmental protection or, indeed, a right to a healthy environment as set out in the *Law on*

Environmental Protection. Property rights, for example, enable citizens to not only own property but to act as they will in relation to it (within the bounds of legal obligations). In addition, while there have been some positive steps toward environmental law reform, these remain limited and are not provided with the necessary resources for their implementation.

In general, however, the limitations expressed in this thesis suggest that environmental issues are likely to remain on the periphery of the political agenda. The analysis presented demonstrates that there has not been a *commitment* to environmental protection on the part of those who have governed since 1990, nor is there such a commitment amongst the general populace. Many of the issues discussed explain, to some extent, why this is the case.

The example given of economic hardship is definitely an obstacle to the support for post-materialist or "soft" political concerns such as the environment. However, it has also been shown that while the poor state of the economy is influential in de-motivating those who have barely enough money to live, this is not adequate reasoning for environmentally destructive decisions on the part of governments. Economic hardship certainly has had a convincing role in decision-making but economic concerns need not have such primacy, even in a country which is faced with such dramatic reform. The Lithuanian government has rejected, on economic grounds, many small, inexpensive environmental protection proposals while, at the same time injecting large investments into the proposed oil terminal. There are relatively inexpensive ways of reducing emissions and efficiency measures which save money while simultaneously reducing pollution and which could be promoted in Lithuania. As Chapter 5 demonstrates, the links between economy and the environment are such that the government cannot continue to claim that the environment must wait for the economy to improve. Without the *commitment* to environmental protection discussed above, an improved economy is of no benefit to the environment and is, in fact, likely to create more degradation. Meanwhile ignoring environmental issues on the path to economic reform (establishing economic independence) only increases the problems to be resolved which may then require even more resources (financial, technical, and human).

There are, then, factors other than the economy which have influenced both the governments' lack of commitment to environmental rehabilitation and protection and the declining interest and enthusiasm for such issues on the

part of Lithuanian society. In terms of the latter, the decline in activism and participation in elections together with the relatively low levels of membership (as compared with Western democracies) in political parties or NGOs, must also be attributed to the broader political developments which has led to disillusionment and apathy. The lack of formal avenues for participation, even at the level of expressing concern over particular issues, the unresponsiveness of government when concerns are expressed, the ongoing corruption which has contributed to the lack of trust in and respect for, politicians and the democratic process have all contributed to a declining interest in political life.

As discussed in Chapter 4, the Greens, in particular, have struggled to maintain respect and support due to the actions of those in the political arena, not least of which has been bitter feuding and factioning within the Party. This has had implications for the reputation of the Greens in general, even though the Green Movement remains independent from the Green Party. Prominent members of the Green Movement at the time of secession have since moved into other areas, often within the bureaucracy, adding to the sense of abandonment and disillusionment as well as reducing the attraction of the Green Movement. So, as noted by Reisinger et al. (1994:206), the decline in political activism and membership of NGOs since the restoration of independence could have more to do with the public's perception of parties, institutions, or the candidates and their actions than with economic adversity or a lack of support for democratic values.

The decline in public support for environmental issues and willingness to act on improving the environmental situation has had definite consequences for the state of the environment and especially for the likelihood of creating an environmentally sustainable society. The less public support for environmental issues, the less likely there will be government action. There were a number of successful environment demonstrations at the height of dissent in the 1988-1991 period and, while there have still been successes such as influencing the location of the Butinge oil terminal, and stopping the construction of an airport in Neringa National Park, these have not been on the scale of those earlier actions, nor have they had the level of public backing. Meanwhile, several projects which were abandoned on environmental grounds after public pressure in Gorbachev's *glasnost* era, were restarted under the "Lithuania's economic independence" banner. This compounded the sense of disillusionment amongst those who had worked to protect the environment. The apparent betrayal of the once Greens leader,

Vaisvila, with the decision to restart the Kruonis Hydro-accumulation station, was a particularly sore point amongst environmentalists and the public.

Another aspect of the decline in Green support is the argument that environmental concerns never held a position of philosophical attachment within the people. Although it appeared that *Sajudis* and the Green movement were fighting for change in the same way that environmentalists were in the West, the environment became a seemingly apolitical but useful tool for the realisation of the nationalist agenda to restore independence. Thus, while environmental problems still existed under new independent Lithuanian governments, public opposition to environmental degradation dwindled. That is not to say that many were not deeply concerned about and committed to resolving environmental degradation under Soviet rule. However, attacking the newly elected Lithuanian Government was more difficult than blaming the central Soviet Government (who are still held responsible for environmental problems in Lithuania). Opposition to environmental degradation under independent governments in Lithuania has not attracted the level of support generated in opposing the Soviet authorities on similar issues. This problem was compounded by the dissolution of *Sajudis* and the Greens whereby a central focus was lost.

While the primacy of economic development has certainly been the driving force of government decisions (regardless of their political leanings) there are other reasons for a lack of commitment to environmental protection. The decline in an public environmental voice is one, yet the government has had a role in such a decline. There are no causal explanations, only interrelated or circular arguments. Corruption and a legacy of "soviet thinking" have also had a role in the development of *glasnost*, or openness, which is an important aspect of an environmentally sustainable society. The attitude of secrecy, of government versus the people, and of promoting big business have all contributed to the failure to develop an environmentally progressive political agenda.

Environmental law reform has also had a relatively low priority and, in the face of a deluge of legislative reform, lawyers are unwilling or unable to take on cases involving environmental crime. Public participation, while stated in broad terms in several new laws relating to the environment, is not provided with the mechanisms for its functioning in practice. Environmental protection in Lithuania is reliant not only on the legal commitments of governments, companies, and individuals but it also heavily reliant on fiscal

measures to fund environmental programmes. These measures form part of the law. This ensures some allocation of funds for the environment sector but it tends to take responsibility away from the government to *commit* regular financial contributions to the environment sector. Funding has been provided for waste water treatment, for example, but it is not substantial when compared with allocations for the economics and industry sectors and the environmental allocation has, moreover, been substantially decreased as such projects approach completion.

The above mentioned obstacles to the creation of an environmentally sustainable society also explain why many environmental problems remain. Water pollution is being addressed by the construction of treatment plants but other problems, particularly those without direct human impacts, still exist. While treatment plants were a necessary step (especially in Kaunas on the Nemunas river), they are end-point, technical solutions. If environmental integrity is to be protected, there also needs to be some focus on preventative measures. The continued use of nuclear power is not a technical but a political decision which is not compatible with an environmentally sustainable society. Of course, one must consider the environmental impacts of alternatives such as air pollution associated with electricity produced from coal, or oil but there are technical solutions to reduce such impacts. Claims of economic reasoning make little sense when the economic cost of continuing nuclear power (including the cost of uranium, replacing channels, waste storage facilities, safety upgrades, and funds directed toward the Kruonis Hydro-accumulation plant) is very high, not to mention the social and environmental costs. Further, there seems to be a contradiction in claiming that Lithuania can not afford to lose Ignalina when so much money has been directed toward the construction of the economically inefficient oil terminal which has not, so far, been completed. The reason is that such decisions are made based on political motives, influenced by national concerns, by those who have something to gain by their implementation.

There are many interrelated issues involved in the transition from communism to a free market capitalist state. The paradox is that while political, economic, and social reforms are a necessary facet of Lithuanian environmental rehabilitation and protection, they do not guarantee the development of an environmentally sustainable society; even if one considers the environmentally sensitive aspects of Lithuanian history and the mass support for environmental issues in the 1988-1991 period. Further, there are aspects of the changes which have created new environmental problems,

particularly in the area of waste management. So there are no straightforward answers, everything must be qualified. However, it is certain that Lithuania will not develop into an environmentally progressive country outside of what is possible within the specific temporal and spatial characteristics of the region. There remains a possibility that, with the passage of time, intense and vocal opposition to environmental degradation might resurface, with environmental issues regaining a position of priority on the political agenda. However, considering most of the limitations discussed in the thesis are likely to remain, it seems unlikely.

A philosophical commitment to environmental protection may be too much to hope for in most modern governments but the worldwide development of legal instruments enshrining environmental principles, well developed infrastructures for public participation in the decision-making process, expanding international pressure to accept scientific warnings of environmental degradation, and a growing understanding of the relationship between ecology and economics are features which help facilitate ecologically sustainable development. In this respect, Lithuania has begun to turn the situation around. Should they be expected to do more than the other nations of the world in this regard?

References

Edited Books, Monographs, Articles, and Consultancy Reports

Adelvo-Calta, P., 1996a; 'Nuclear Renaissance', *The Bulletin*, 5(4); 12-15.

Adelvo-Calta, P., 1996b; 'Nuclear Power in CEE: An Empty Elegy', *The Bulletin;* 5(4); 15.

Adomaitiene, A., 1992a; 'Zalieji Klausinejo Ministrus' (The Greens Question the Ministers), *Lietuvos Aidas*, January 25; 13.

Adomaitiene, A., 1992b; 'Kruonyje Turbinos Suksis' (The Turbines in Kruonis will Begin Turning), *Lietuvos Aidas*, February 2; 15.

Andréasson-Gren, I., Michanek, G., and Ebbesson, J., 1992; 'Economy and Law - Environmental Protection in the Baltic Region' in *The Baltic Sea Environment*, session 7; The Baltic University Secretariat, Uppsala.

Antanyniene, A., Baranauskiene, A., Budriene, S., Jankaviciute, G., Jankevicius, K., Kasperoviciene, J., Kucinskiene, A., Mazeikaite, S., Slapkauskaite, G., Sulijiene, R., and Trainauskaite, I., 1994; 'Hydrobiological Condition and Water Quality Estimation of Kursiu Marios Lagoon, 1991' in Thurston, R. V. (ed.), 1994; *Environmental Studies in the Nemunas River Basin, Lithuania*, 73-83; Office for Research and Development, US Environmental Protection Agency; Athens, Georgia.

Arbaciauskas, V., 1997; 'Need and Implementation of Environmental Management System as in Lithuania', paper presented at *Production, Economy, and Environment: Theories and Applications*, International Workshop, June 1996, Vilnius.

Arby, G., 1990a; 'Nutrients and Stable Organics - A Marine Hazard', *Enviro*, no. 10; 10-2.

Arby, G., 1990b; 'Joint Action on Polluted Baltic', *Enviro*, no. 10; 12-3

Applegren, B.G., 1994; *Agricultural and Environmental Legislation - Lithuania: First Report on Water Resources Policy*; Food and Agriculture Organization of the United Nations, Rome.

Atgaja, 1992; 'Something About Atgaja'; 3 page pamphlet.

Auster, M., 1988; 'The Harmonisation of Environmental Law: A European-Australian Comparison', *Environmental and Planning Law Journal*; December; 276-82.

Avineri, S. and De-Shalit, A. (eds.), 1992; *Communitarianism and Individualism*; Oxford University Press, New York.

Balbierius, A., 1992; 'A Short History of the Lithuanian Greens', *Lithuanian Weekly*, July 3-9; 3.

Baltakis, J., 1996; '43 Millioniu Litu Planas Visuomenes Saugumui Ignalinos Atomines Jegaines Apylinkese' (43 Million Lt Planned for Civil Security in Ignalina Atomic Power Plant Surroundings), *Lietuvos Aidas*, no. 146, July 27; 2.

Baltrusaitis, T., 1994; 'News from Lithuania'; broadcast to BALT-L internet list; May 12.

Bank of Lithuania (The), 1995; *Investors' Guidelines for Environmental Due Diligence in Lithuania*; Enterprise and Financial Sector Assistance Project; ELFS, Vilnius.

Banks, A. J., 1991; *Lithuania's Environmental Problems: Cultural and Political Problems*; TUU Lithuanian Studies Society, Sandy Bay.

Banks, A. J., 1993; 'Environmental Co-operation in the Baltic Sea Region: A Lithuanian Perspective', *GeoJournal*, 33(1); 37-42.

Banks, A. J., and Todd, J. J., 1994; 'An Environmental Perspective on Lithuania's Energy Options', *Environment and Quality of Life in Central Europe: Problems of Transition*, IGU Regional Conference Proceedings, Prague (CD-ROM).

Banks, A. J., and Todd, J. J., 1995; 'Ignalina Nuclear Power Plant: Problems and Prospects'; *Lithuanian Papers*; vol. 9; 30-34.

Banks, A. J., 1996; 'International Assistance for Environmental Rehabilitation in Lithuania' in Fennell, T. G., and Johansons, H. A. (eds), *Baltic Studies in Australia: vol. II*, 441-461; AABS Australasia, Melbourne.

Banks, A. J. 1997; 'International Assistance for Environmental Purposes in Lithuania 1991-1994' in Lewan, L., (ed.), *Production, Economy, and Environment*, 125-135; Proceedings from an International Workshop; Environmental Studies Centre, University of Vilnius (forthcoming).

Banks, A., J., and Sainsbury, M. T., 1997; 'Human Rights, Environment, and Nuclear Reactors: Toward a Human Right to a Healthy Environment', *Journal of International Relations* (forthcoming).

Baumgartl, B., 1994; '"Only" a Guideline: The Environmental Action Programme for Central and Eastern Europe', *Environmental Impact Assessment Review*, 14(2&3); 147-56.

Beetham, D., 1992; 'Liberal Democracy and the Limits of Democratization', *Political Studies*, XL, Special Issue; 40-53.

Bergström, G.W., 1992; 'Environmental Policy and Co-operation in the Baltic Region' in *The Baltic Sea Environment*, session 8; The Baltic University Secretariat, Uppsala.

Berliner, J. S., 1992; 'Strategies for Privatization in the USSR' in Keren and Ofer (eds); *Trials of Transition: Economic Reform in the Former Communist Bloc*, 215-37; Westview Press, Boulder.

Bissett, R., 1994; 'EIA Legislation: Lithuania', Trip Report to Environment Policy Europe asbl; Cobham Resource Consultants, Edinburgh.

Bluffstone, R., 1995; 'Achieving Environmental and Fiscal Goals in Lithuania using Pollution Charges'; Central and Eastern Europe Environmental Economics and Policy Project, Lithuania Working Paper #1; USAID and Harvard Institute for International Development, Vilnius.

Bogert, C., 1990; 'Poison Politics', *Newsweeek*, Jan. 22; 16-21.

Bond, D., 1991; *Trade or Aid? Official Export Credit Agencies and the Economic development of Eastern Europe and the Soviet Union*; Public Policy Paper 4; Institute for East-West Security Studies, New York/Prague.

Bookchin, M., 1994; 'Nationalism and the 'National Question'', *Society and Nature*, 2(2); 8-36.

Bowers, C., 1993; 'Europe's Motorways: The Drive for Mobility' ,*The Ecologist*, 23(4), July/August; 125-30.

Boyle, S., and Froggart, A., 1993; *Shutdown!: Realising the Low Cost Option to Phase Out Nuclear Power in Eastern Europe*; Greenpeace International, London.

Brazauskas, A., 1993; 'Lithuania Searches for Oil', *The Baltic Independent*, 4(190), December; B1.

Brazyte-Bindokiene, D., 1989; *Lithuanian Customs and Traditions*; Lithuanian World Community Inc., Chicago.

Breuilly, J., 1993; *Nationalism and the State* (2nd ed.); Manchester University Press, Manchester.

Broms, B., 1989; 'Multilateral Agreements in the Baltic Region' in Westing, A. H. (ed.), *Comprehensive Security for the Baltic: An Environmental Approach*, 62-71; SAGE Publications, London.

Brucan, S., 1992; 'Democracy at Odds with the Market in Post-Communist Societies' in Keren and Ofer (eds); *Trials of Transition: Economic Reform in the Former Communist Bloc*, 19-25; Westview Press, Boulder.

Bruce, J. P., 1981; 'Choices in Resource Use: Ethical Perspectives' in Jeske, W. E. (ed.); *Economics, Ethics, Ecology: Roots of Productive Conservation*, 12-19; Soil Conservation Society of America, Ankeny.

Brukas, A., 1994; 'The Legal Frame of Ecological Sustainable Regional Development in Forestry in Connection with the Privatisation Process', paper presented at *Ecological Regional Development in Lithuania*, International Seminar, October 20-24, Birstonas, Lithuania.

Budreckis, A., 1969; 'Lithuanian Resistance, 1940-52' in Gerutis, A., (ed.), *Lithuania: 700 Years*, 313-377; Manyland Books, New York.

Budvytiene, V., Budvytus, S., and Kazlauskiene, N., 1995; 'Environmental Policy: Institutional and Legal Framework of Environmental Protection in Agriculture - The Lithuanian Case' in Pedersen, K. H., (ed.); *The Institutional and Legal Framework for Environmental Policy in the Agricultural Sector: Estonia, Latvia, and Lithuania*, 70-100; South Jutland University Press, Esbjerg.

Bukelskis, E., and Serelyte, D., 1994; 'Carcinogenesis Research on Fishes of Kursiu Marios Lagoon, 1991' in Thurston, R. V. (ed.); *Environmental Studies in the Nemunas River Basin, Lithuania*, 103-106; Office for Research and Development, US Environmental Protection Agency; Athens, Georgia.

Bush, S., Leonard, M., Bowen, B., Jones, B., Donaldson, K., and Ho Trieu, L., 1993; *Energy: Demand and Supply Projections Australia 1992-93 to 2004-05*; ABARE; Canberra.

Business Council for Sustainable Development, The, 1994; 'Western Protectionism Threatens Sustainable Development in Central/Eastern Europe', *Tomorrow*; iv(3); 35.

Cassen, R., and Associates, 1986; *Does Aid Work?*; Clarendon Press, Oxford.

Cave, S., 1990; 'Cleaning Up Eastern Europe', *Our Planet*; vol. 2(2); 4-7.

Centre for Co-operation with the Economies in Transition (ed.), 1994; *Agriculture and the Environment in the Transition to a Market Economy*; OECD, Paris.

Chong, Y. Y., and Van der Hoek, M. P., 1996; 'Cost Effectiveness of Foreign Aid Programs in the Baltic; paper presented at Atlantic Economic Society Conference, October,Washington DC.

Crouch, C. and Marquand, D. (eds.), 1990; *The Politics of 1992: Beyond the Single European Market*; Basil Blackwell, Oxford.

Danish Environmental Protection Agency (Central and Eastern Europe Cooperation Secretariat), 1994; 'Preliminary list of projects in Lithuania which have received grants'; Danish EPA, Copenhagen.

Danish Environmental Protection Agency (Environmental Support Fund for Central and Eastern Europe), 1996a; 'Co-operation Development, Programme Priority Areas, and Project Pipeline 1996'; internal document, Copenhagen.

Danish Environmental Protection Agency (Environmental Support Fund for Central and Eastern Europe), 1996b; 'Danish Environmental Support to Lithuania'; internal document, Copenhagen.

Davis, G., Wanna, J, Warhurst, J., Weller, P., 1988; *Public Policy in Australia*, Allen and Unwin, Sydney.

Démarcq, F., 1993; 'The Lithuanian Power Subsector and its Development Options'; paper presented at the *International Conference on Restructuring of the Lithuanian Energy Sector* in Vilnius, Lithuania; European Bank for Reconstruction and Development, November.

Devereux, J., 1992; 'Socialism and the Environment' in Kerr, D. (ed.), *Reinventing Socialism*, 99-107; Pluto Press Australia Ltd., Leichardt.

Dobson, A., 1990; *Green Political Thought*; Unwin Hyman, London.

Dragunevicius, A., 'Improvement of Urban Energy Efficiency in Lithuania', paper presented in Budapest, October 11-12.

Drunga, M., 1989; 'Adamkus On Lithuanian Environmental Issues', *Baltic Forum*, Spring; 25-37.

Dryzek, J. S., 1992 (1987); *Rational Ecology: Environment and Political Economy*; Blackwell, Oxford.

Dundzila, A., 1996; 'Romuva: Ancient Religion Revived', *Lithuanian Papers*, vol. 10; 52-54.

Dunkley, G., 1992; *The Greening of the Red: Sustainability, Socialism, and the Environmental Crisis*; Pluto Press Australia Ltd., Leichardt.

Duzinskas, R. and Gutkauskas, A., 1994; 'Prospects for Agricultural and Environmental Policy Integration' in Centre for Co-operation with the Economies in Transition (ed.), *Agriculture and the Environment in the Transition to a Market Economy*, 79-95; OECD, Paris.

Dybern, B. I., 1989; 'Non-governmental Scientific Organisations Relevant to the Baltic region' in Westing, A. H. (ed.), *Comprehensive Security for the Baltic: An Environmental Approach*, 87-89; SAGE Publications, London.

Eckerberg, K., 1994; 'Environmental Problems and Policy Options in the Baltic States: Learning From the West?', *Environmental Politics*, 3(3), Autumn; 445-78.

Eckerberg, K., Mydske, P. K., Niemi-Iilahti, A., and Pedersen, K. H., (eds), 1994; *Comparing Nordic and Baltic Countries - Environmetal Problems and Policies in Agriculutre and Forestry*; Nordic Council of Ministers, Copenhagen.

Eckerberg, K., and Pedersen, K. H., 1997; 'Policy and Economic Instruments of Environmental Management' in Lewan, L. (ed.) *Production, Economy, and Environment: Theories and Applications*, 196-207; Proceedings from an International Workshop, June 1996, Vilnius; Environmental Studies Centre, University of Vilnius (forthcoming).

Eckersley, R., 1987; 'The Road to Ecotopia? Socialism Versus Environmentalism', *Island Magazine*; no. 32;18-25.

Eckersley, R., 1992; *Environmentalism and Political Theory: Toward an*

Ecocentric Approach; UCL Press, London.

Eckersley, R., 1993; 'Free Market Environmentalism: Friend or Foe?', *Environmental Politics*; 2(1), Spring; 1-19.

Ekins, P., Hillman, M., and Hutchinson, R., 1992; *Wealth Beyond Measure: An Atlas of New Economics*; Gaia Books Limited, London.

Emersen, R., 1960; *From Empire to Nation*; Beacon Press, Boston.

Encyclopedia Lituanica, 1976, vol. 5; Juozas Kapocius, Boston.

Energy for Sustainable Devlopment Ltd., and Lithuanian Energy Institute, 1996; *TERES II Country Report - Lithuania*; ALTENER Programme, Corsham, UK.

Ennel, M., Lothigius, J., and Thurén, A., 1991; 'Toxic Organics Have Come a Long Way and it All Ends Up in the Baltic', *Enviro*; no. 11; 12-15.

Environmental Protection Department of Lithuania, 1992; 'National Report to UNCED'; EPD, Vilnius.

Environmental Resources Limited, 1993; *Investors' Environmental Guidelines: Lithuania*; EBRD, London.

Europa World Book, 1994; 'International Organizations'; 128-54.

European Bank for Reconstruction and Development, 1994; *Environmental Impact Assessment Legislation: Czech Republic, Estonia, Hungary, Latvia, Ltihuania, Poland, Slovak Republic, Slovenia*; Graham & Trotman/Martinus Nijhoff, London.

European Bank of Reconstruction and Development (EBRD), 1996; *Lithuania: Country Profile*; EBRD, Sofia.

European Community, 1990; 'Environmental Policy in the European Community'; periodical 5, Brussels.

Felmingham, B., 1992; 'Lithuania Alone: The Post-Independence Economy' in Taskunas A. P., (ed.), *Lithuania in 1991*, 101-109; TUU Lithuanian Studies Society, Hobart.

Ferm, R., 1991; 'Integrated Management of the Baltic Sea', *Marine Pollution Bulletin*, 23; 533-540.

Feschbach, M., and Friendly, Jr., A., 1992; *Ecocide in the USSR*; Basic Books, New York.

Fink, U., Neumann, W., Panten, T., Bossew, P., Mraz, G., Wenisch, A., Schreiber, H., 1993; 'The International Atomic Energy Agency: A Critical Documentation of the Agency's Policy' (Summary 3rd ed.); Anti-Atom-International & Austrian Ministry of Environment, Youth, and Family, Vienna.

Fisher, D., 1992; *Paradise Deferred: Environmental Policymaking in Central and Eastern Europe*; Royal Institute of International Affairs and Ecological Studies Institute, London.

Fitzmaurice, J., 1992; *The Baltic: A Regional Future?*; St. Martin's Press, New York.

Fitzmaurice, M., 1992; *International Legal Problems of the Environmental Protection of the Baltic Sea*; Martinus Nijoff/Graham & Trotman, Dordrecht.

Forest, J., 1990; *Free at Last? The Impact of Perestroika on Religious Life in the Soviet Union*; Darton, Longman & Todd Ltd., London.

French, H., 1990; *Green Revolutions: Environmental Reconstruction in Eastern Europe and the Soviet Union*, Worldwatch Paper 99; Worldwatch Institute, Washington D.C.

Friends of the Earth International, 1992; *Russian Roulette: Nuclear Power Reactors in Eastern Europe and the Former Soviet Union*; FOEI.

Gerutis, A., (ed.), 1969; *Lithuania: 700 Years*; Manyland Books, New York.

Ghai, D., 1995: 'Global Markets, Global Insecurity', *Our Planet*; 7(3); 6-8.

Gibson, J. L., 1996; 'A Mile Wide But an Inch Deep?: The Structure of Democratic Commitments in the Former USSR', *American Journal of Political Science*, 40(2); 396-420.

Giddens, A., 1994; *Beyond Left and Right: The Future of Radical Politics*; Polity Press, Cambridge.

Gimbutas, M., 1963; *The Balts*; Frederick A. Praeger, New York.

Girnius, K. K., 1986; 'Soviet Terror in Lithuania During the Post-War Years', *Lituanus*; 32(4), 29-49.

Girnius, S., 1995; 'Lithuania: Corruption Dominates' in Open Media Research Institute (ed.), *Building Democracy: The OMRI Annual Survey of Eastern Europe and the Former Soviet Union*, 56-62; M.E.Sharpe, Armonk.

Gorz, A., 1980 (1987); *Ecology as Politics*; Pluto Press, London.

Gould, C. G., 1988; *Rethinking Democracy : Freedom and Social Cooperation in Politics, Economy, and Society*; Cambridge Unversity Press, Cambridge.

Granvik, M., 1991; 'Korsnäs pulp mill turns off the chlorine', *Enviro*, no. 11; 16-20.

Gricius, A., 1992; 'The Challenges Facing the New Lithuania in an Integrating European Order' in Kukk, Jervell, & Joenniemi (eds.), *The Baltic Sea Area: A Region in the Making*, 180-195; Europa-programmet, Oslo.

Grineviciute, R., 1992; 'Kas Uzmerks Akis III Sajudziui?', *Respublika*, September 1st, 1.

Grundmann, R., 1991; *Marxism and Ecology*; Clarendon Press, Oxford.

Gruzevskis, B., and Misiunas, A., 1996; 'Employment and Unemployment' in Lithuanian Department of Statistics (eds), 1996; *Survey of Lithuanian Economy, May 1996*, 24-27; Lithuanian Department of Statistics, Vilnius.

Gyulai, I., 1994; 'Introducing the Legal Frame for an Ecological Sustainable Regional Development in the Lucerne/Sofia Process Preparation' (sic), paper presented at *Ecological Regional Development in Lithuania* International Seminar, October 20-24, Birstonas, Lithuania.

Hägerhäll, B., and Hägerhäll-Aniansson, B., 1995; 'Too Many Consultants, Too Little Investments', *WWF Baltic Bulletin*, vol. 1; 25-27.

Håkanson, L., 1992; 'Physical Geography of the Baltic' in *The Baltic Sea Environment*, session 1; The Baltic University Secretariat, Uppsala.

Hamilton, C., 1994; *The Mystic Economist*; Willow Park Press, Fyshwick.

Hansen, N. O., 1995; 'Preventing Ecocide', *Our Planet*, 7(3); 20-2.

Harrington, W., 1993; *Air and Water Quality Permitting in Lithuania*; Resources for the Future; Washington DC.

Harrison, F., 1991; 'Geonomics: The Making of a Post-Socialist Society' in Parkin, S., (ed.); *Green Light on Europe*, 202-25; Heretic Books, London.

Hartman, G., 1992; 'The Origins and Growth of Baltic Nationalism as a force for Independence', *Lituanus*, 38(3); 69-87.

Held, D., 1992; 'Democracy: From City-states to a Cosmopolitan Order?', *Political Studies*, XL Special Issue; 10-39.

Held, D., (ed.), 1993; *Prospects for Democracy: North, South, East, West*; Polity Press, Cambridge.

Helsinki Commission, 1992; 'The Baltic Sea Joint Comprehensive Environmental Action Programme (Preliminary Version)' submitted at *Diplomatic Conference on the Protection of the Marine Environment of the Baltic Sea*, Conference Document No. 5/3, Agenda Item 5; Conference Secretariat, Helsinki.

Helsinki Commission, 1993a; *Baltic Sea Environment Proceedings No. 47*; HELCOM, Helsinki.

Helsinki Commission, 1993b; 'The Baltic Sea Joint Comprehensive Environmental Action Programme'; *Baltic Sea Environment Proceedings No. 48*; HELCOM, Helsinki.

Hiden, J. and Salmon, P., 1991; *The Baltic Nations and Europe*; Longman; London.

Hindahl, E., 1995; 'Dealing with Ignalina's Giant Problems', *The Baltic Independent*; 6(265); B4.

Hinrichsen, D., 1992; 'Electric Light at the End of Eastern Europe's Nuclear Tunnel', *Tomorrow*, 2(3); 36-39.

Hinrichsen, D., 1993; 'Russian Roulette: A New Nuclear Threat from Eastern Europe', *The Amicus Journal*; (14), Winter; 35-7.

Holmes, L., 1993; *The End of Communist Power: Anti-Corruption Campaigns and Legitimation Crisis*; Melbourne University Press, Carlton.

Hope, N., 1994; 'Interwar Statehood: Symbol and Reality' in Smith, G. (ed.), *The Baltic States: The National Self-Determination of Estonia, Latvia and Lithuania*, 41-68; Macmillan, London.

Houston, G., and Tunnicliffe, J., 1994; *Waste Water Treatment in Lithuania*; National Economic Research Associates, London.

Hughes, G., 1992; 'Clean Air But No Jobs?: Environmental Priorities and Policies During the Transition in Central and Eastern Europe' in *Conference on Energy and Environment in European Economies in Transition: Priorities and Opportunities for Co-operation and Integration - Proceedings*, 61-76; IEA, OECD, CCEET, Prague.

Hughes, G., 199?; 'Are the Costs of Cleaning up Eastern Europe Exaggerated? Economic Reform and the Environment', *Oxford Review of Economic Policy*, 7(4); 106-136.

Hurrell, A and Kingsbury, B. (eds.), 1992; *The International Politics of the Environment*; Clarendon Press, Oxford.

Hurrell, A and Kingsbury, B.,1992; 'The International Politics of the Environment: An Introduction' in Hurrell, A and Kingsbury, B., (eds.); *The International Politics of the Environment*; Clarendon Press, Oxford.

IC Consult, Erm Energy Limited, Cowi Consult, and Lithuanian Energy Institute, 1993; *Republic of Lithuania - National Energy Strategy*, volume 1: The Strategy, Draft Report, July.

Ignatieff, M., 1994; *Blood and Belonging: Journeys into the New Nationalism*; Vintage, London.

Jacobs, M., 1991; *The Green Economy: Environment, Sustainable Development and the Politics of the Future*; Pluto Press, London

Januska, A., 1996; 'Back to Europe: Lithuania's Steps and Efforts Towards the EU', *Lithuania in the World*, no. 2; 12-13.

Jazukeviciute, Dalia, 1992; 'Ar Gali Lietuviai ir Latviai Susikalbeti?' (Is it Possible for Lithuanians and Latvians Communicate?), *Respublika*, August 25; 4.

Jenkins, T., 1992; *Dangerous Liaisons: Western Involvement in the Nuclear Power Industry of Central and Eastern Europe*; Friends of the Earth, London.

Jeske, W. E. (ed.), 1981; *Economics, Ethics, Ecology: Roots of Productive Conservation*; Soil Conservation Society of America, Ankeny.

Jeziorski, A., 1992; 'Reactor Leak Deepens Lithuanian Power Crisis', *The Baltic Independent*; 3(133), October; 3.

Jeziorski, A., 1993a; 'Lithuanians Uneasy with Ebbing Energy Supplies', *The Baltic Independent*; 4(161), May; B2.

Jeziorski, A., 1993b; 'Inertia Blocks Lithuania's Gateway to the World', *The Baltic Independent*, 4(169), July; B3.

Jeziorski, A. and Oll, L., 1992; 'Energy Ministers Plan New Reactor at Ignalina', *The Baltic Independent*; 3(136), November; 6.

Joenniemi, P., Wiberg, H., and Wæver, O., 1992; 'Outline for a Centre on Peace Research in the Baltic Sea Region', *Working Papers 6*; Centre for Peace and Conflict Research, Copenhagen.

Jones, B., 1992; 'Redefining Socialism' in Kerr, D. (ed.); *Reinventing Socialism*, ch. 1, 11-26; Pluto Press Australia Ltd, Leichardt.

Jomantiene, I., 1994; 'And the Dead Shall Not Pass From Memory...', *The Baltic Indpendent*, 5(237); 11.

Juodkazis, V., 1994; 'Groundwater Quality and its Monitoring in the Baltic States', *Geojournal*, 33(1), May; 63-70.

Juodkazis, V., and Klimas, A., 1997; 'Groundwater Pollution and Water Supply Economy in Lithuania' in Lewan, L. (ed.), *Production, Economy, and Environment: Theories and Applications*, 35-42; Proceedings from an International Workshop, June 1996, Vilnius; Environmental Studies Centre, University of Vilnius (forthcoming).

K-Konsult and Krüger Consult 1992; *Pre-feasibility Study of the Lithuanian Coast and the Nemunas River Basin: Synthesis Report* (Joint Venture Study); K-Konsult Water Projects AB and Krüger Consult AS, Stockholm.

Kabala, S. J., 1993; 'Environmental Affairs and the Emergence of Pluralism in Poland: A Case of Political Symbiosis' in Vari, A. and Tamas, P., (eds); *Environment and Economic Transition: Policy and Politics in Central and Eastern Europe*; Kluwer Academic Publishers, Dordrecht.

Kalinauskas, Z., 1996; 'Priority Trends of Economic Development' in Lithuanian Department of Statistics (eds), 1996; *Survey of Lithuanian Economy, May 1996*, 19-23; Lithuanian Department of Statistics, Vilnius.

Kalinauskas, Z., and Kaminskiene, B., 1996; 'General Indicators of Economic Development' in Lithuanian Department of Statistics (eds), 1996; *Survey of Lithuanian Economy, May 1996*, 10-15; Lithuanian Department of Statistics, Vilnius.

Kaniauskiene, A., 1989; 'Dvi Nuomones' (Two Opinions), *Musu Gamta*; No. 3; 10.

Karaliunas, A., 1994; 'Power Industry at the Cross-roads', *Lithuania in the World;* March-April; 7-13.

Karalius, A., 1989; 'Lietuvos Zaliuju Planai ir Rupesciai' (The Plans and Concerns of the Greens), *Musu Gamta;* no. 3; 5.

Karklins, R., 1994; *Ethnopolitics and Transition to Democracy: The Collapse of the USSR and Latvia;* The Woodrow Wilson Center Press and The John Hopkins University Press, Washington D.C. and Baltimore.

Kassiola, J. J., 1990; *The Death of Industrial Civilization: The Limits to Economic Growth and the Repoliticization of Advanced Industrial Society;* State University of New York Press, Albany.

Kautsky, L., 1992; 'Life in the Baltic Sea' in *The Baltic Sea Environment,* session 2; The Baltic University Secretariat, Uppsala.

Kavaliauskas, P., 1992; 'Terminalo Valstybine Ekspertize - Falsifikatas!', *Respublika;* August 29, no. 169(793); 2.

Kavolis, V., 1989; 'The Devil's Invasion: Cultural Changes in Early Modern Lithuania', *Lituanus;* 35(4); 5-26.

Kazokas, G., 1992; Lithuanian Artists in Australia 1950-1990; unpublished PhD Thesis, Department of History, University of Tasmania, Australia.

Kellas, J. G., 1991; *The Politics of Nationalism and Ethnicity;* Macmillan, London.

Kemezys, K. J., 1992; 'Lithuanian Oil' in Taskunas, A. P. (ed.), *Lithuania in 1991: Selected Readings,* 109-112; TUU Lithuanian Studies Society, Hobart.

Kennedy, P., 1993; *Preparing for the Twenty-first Century;* HarperCollins, London.

Keren, M. and Ofer, G., 1992; *Trials of Transition: Economic Reform in the Former Communist Bloc;* Westview Press, Boulder.

Keren, M., 1992; 'The Socialist Firm, The Value of Capital and the Transition to Capitalism' in Keren and Ofer (eds); *Trials of Transition: Economic Reform in the Former Communist Bloc,* 239-53; Westview Press, Boulder.

Kerr, D., (ed.), 1992; *Reinventing Socialism;* Pluto Press Australia Ltd., Leichardt.

Kindler, J., and Lintner, S. F., 1993; 'An Action Plan to Clean up the Baltic', *Environment;* 35(8); 7-31.

Klarer, J., (ed.), 1994; *Use of Economic Instruments in Environmental Policy in Central and Eastern Europe;* The Regional Environmental Center for Central and Eastern Europe, Budapest.

Knight, P., 1994; 'See You in Court' *Tomorrow,* iv(3), July/September; 68-9.

Kritkautsky Y, R., 1995; 'Lithuania' in Pryde, P. R., (ed.); *Environmental Resources and Constraints in the Former Soviet Republics*, Ch. 8, 125-139; Westview Press, Boulder.

Kuuk, M., Jervell, S., and Joenniemi, P., (eds), 1992; *The Baltic Sea Area: A Region in the Making*; Europa-programmet and The Baltic Institute, Oslo and Karlskroner.

Kutas, S., 1992; 'Energetics in Lithuania', *Baltic News*, May; 9.

Kutas, S., 1996; 'Energetika: Dabartis ir Ateitis, Vieta ir Tikslas', (Energy: Now and in the Future, (its) Place and Purpose), *Mokslas ir Technika*, no.7: 8.

Lahmeyer International and Lithuanian Energy Institute, 1996; *Lithuania:Energy Emergency Planning - (Draft Final Report)*; European Bank of Reconstruction and Development.

Lang, T. and Hines, C., 1993; *The New Protectionism: Protecting the Future Against Free Trade*; Earthscan, London.

Lehoczki, Z., and Peszko, G., 1994; 'Environmental Funds in the Transition to a Market Economy'; paper prepared for the *OECD Conference on Environmental Funds*; St. Petersberg, October 27-9.

Lietuvu Enciklopedija (Encyclopedia of Lithuania), 1956; vol. 8; LEL.

Lieven, A., 1993; *The Baltic Revolution: Estonia, Latvia, Lithuania and the Path to Independence*; Yale University Press, New Haven.

Lithuanian Department of Statistics, 1996a; *Economic and Social Development in Lithuania*, January-May; Vilnius.

Lithuanian Department of Statistics, 1996b; *Lithuania in Figures*; Methodical Publishing Company; Vilnius.

Lithuanian Department of Statistics, 1996c; *Lithuania , Latvia, Estonia: Selected Data*; Methodical Publishing Company; Vilnius.

Lithuanian Department of Statistics (eds), 1996d; *Survey of Lithuanian Economy, May 1996*; Lithuanian Department of Statistics, Vilnius.

Lithuanian Department of Statistics, Statistical Office of Estonia, and Central Statistical Bureau of Latvia, 1996; *Demographic Statistics in the Baltic Countries*; Vilnius, Tallinn, Riga.

Lithuanian Energy Ministry, Lithuanian State Power System, Vattenfall Ab and Imatran Voima Oy, 1993; *Energy Master Plan For Lithuanian State Power System*, English Version, first draft, Vilnius.

Lithuanian Fund for Nature, 1995; *Conservation and Management of Lithuanian Wetlands*; WWF Sweden, Vilnius.

Lithuanian Green Party - Klaipeda Branch, 1994; Resolution from Ecological Conference of the Lithuanian Green Party, June 5, Klaipeda.

Lithuanian Information Institute, 1996; *Guide for Foreign Investors in Lithuania;* Lithuanian Information Institute; Vilnius.

Lithuanian State Power System and Lithuanian Energy Institute, 1996; *Republic of Lithuania: Least Cost Power Sector Development Programme - Final Report* ; Kaunas.

Lithuanian World Community and Lithuanian Green Movement 1989; *Degradation of the Environment in Lithuania;* Brief to the Conference on Security and Cooperation in Europe, Meeting on the Protection of the Environment, Sofia.

Löfstedt, R. E., 1995; 'What factors determine Sweden's provision of environmental aid to Eastern Europe', *Global Environmental Change;* 5(1); 41-49.

Löfstedt, R. E. and Sjöstedt, G., 1995; 'Environmental Aid to Eastern Europe' *Ambio,* 24; 366-370.

Lothigius, J., 1991a; 'Toxic Organic Substances: A Threat to the Baltic', *Enviro,* no. 11; 3-4.

Lothigius, J., 1991b; 'Seals in the Baltic: Victim and Warning Signal', *Enviro;* no. 11; 5-7.

Lothigius, J., 1991c; 'Dioxins', *Enviro,* no. 11; 21.

Lucas, E., 1994; 'Baltic Oil Set to Flow', *The Baltic Independent,* 4(206), April; B1.

Lucas, E., 1995a; 'Lithuania:Economic Prospects'; BALT-L internet posting, July 22.

Lucas, E., 1995b; 'Estonia:Economic Outlook'; BALT-L internet posting, July 22.

McFarlane, B. J., 1991; *Other Economic Systems;* Oxford University Press Australia, Melbourne.

McLaughlin, A., 1985; 'Images and Ethics of Nature', *Environmental Ethics;* vol. 7; 293-319.

McLellan, D., (ed.), 1977; *Karl Marx: Selected Writings;* Oxford University Press, Oxford.

Mackenzie, D., 1994; 'How Safe is Safe?', *New Scientist,* August 27; 12-13.

Mackenzie, D., 1995; 'Russia Rejects Pleas to Shut Risky Reactors', *New Scientist,* May 27; 10.

Manser, R., 1993; *The Squandered Dividend: The Free Market and The Environment in Eastern Europe;* Earthscan, London.

Markelevicius, J., 1996; 'Balance of Payments, Foreign Trade' in Lithuanian Department of Statistics (eds), 1996; *Survey of Lithuanian Economy,*

May 1996, 46-55; Lithuanian Department of Statistics, Vilnius.

Martínez-Val, J. M., Aragonés, J. M., Mínguez, E., Perlado, J. M., and Velarde, G., 1990; 'An Analysis of the Physical Causes of the Chernobyl Accident', *Nuclear Technology*, vol. 90; 371-388.

Marx, K., 1844a; 'Alienated Labour' in McLellan (ed.), 1977; *Karl Marx: Selected Writings*, 77-87; Oxford University Press, Oxford.

Marx, K., 1844b; 'Private Property and Communism' in McLellan (ed.), 1977; *Karl Marx: Selected Writings*, 87-96; Oxford University Press, Oxford.

Marx, K., 1857(1941); 'Grundrisse' in McLellan (ed.), 1977; *Karl Marx: Selected Writings*, 345-87; Oxford University Press, Oxford.

Marx, K., 1865; 'Capital' in McLellan (ed.), 1977; *Karl Marx: Selected Writings*, 415-522; Oxford University Press, Oxford.

Mason, D. S., 1992; *Revolution in East-Central Europe: The Rise and Fall of Communism and the Cold War*; Westview Press, Boulder.

Miller, D., 1992; 'Community and Citizenship' in Avineri, S. and De-Shalit, A. (eds.), 1992; *Communitarianism and Individualism*, Ch. 5; Oxford University Press, New York.

Miller, R. F. (ed.), 1992; *The Development of Civil Society in Communist Systems*; Allen and Unwin, Sydney.

Ministry of Environmental Protection (Project Management Unit) 1994; 'Donor and IFI Activities: Database'; MEP, Vilnius.

Ministry of Environmental Protection, 1995a; *Lithuania's Environment: Status, Processes, Trends*; MEP, Vilnius.

Ministry of Environmental Protection, 1995b; *National Environment Strategy*; MEP, Vilnius.

Ministry of Environmental Protection (Centre for Marine Research), 1996; *A Review of Environmental Situation of the Baltic Sea Lithuanian Coastal Zone and the Kursiu Marios Lagoon* [sic]; MEP, Klaipeda.

Ministry of Foreign Affairs (Aid Coordination Unit), 1994; 'Project Data Base - Lithuania, Summary Report' (4th ed.); MFA, Vilnius.

Ministry of Foreign Affairs (European Integration Department), 1995; 'Project Data Base - Lithuania, Summary Report' (5th ed.); MFA, Vilnius.

Morkunas, Z., Ciuzas, A., Jonaitis, V., and Sutiniene, I., 1993; 'An Analysis of Experts' Evaluation of the Current and Forseen Ecological and Social State of the Residential Surroundings of the Ignalina Atomic Power Station Region'; Institute of Philosophy, Sociology, and Law, Vilnius.

Morris, P., 1992; 'Cleaning up the Baltic', *The Baltic Independent*, 3(132), October; 6

Motluk, A, 1995; 'Nuclear Sell-off Generates the Hottest Shares in Town...', *New Scientist*, May 20; 6.

Mouffe, C., (ed.), 1992; *Dimensions of Radical Democracy: Pluralism, Ctizenship, Community*; Verso, London.

Mouffe, C., 1992; 'Democratic Citizenship and the Political Community' in Mouffe, C., (ed.), *Dimensions of Radical Democracy: Pluralism, Ctizenship, Community*, 225-239; Verso, London.

Nafta Board of Directors and Institute of Ecology, 1995; *The Butinge Oil Terminal: Ecological State;* Nafta Board of Directors and Institute of Ecology; Vilnius.

Nero, A. V., 1979; *A Guidebook to Nuclear Reactors*; University of California Press, Berkley.

Nørgaard, O., and Pedersen, K. H., 1994; 'Political and Administrative Preconditions for Environmental Policies in the Baltic States' in Eckerberg, K., Mydske, P. K., Niemi-Iilahti, A., and Perdersen, K. H., (eds); *Comparing Nordic and Baltic Countries - Environmetal Problems and Policies in Agriculutre and Forestry*, 98-122; Nordic Council of Ministers, Copenhagen.

Norwegian Society for the Conservation of Nature, 1994; *The Nordic Environmental Organizations View to EU Membership;* Naturvernforbundet, Oslo.

O'Donoghue, P., 1991; 'Report on the Reactor at the Ignalina Nuclear Power Plant: RBMK-1500'; unpublished manuscript, Toronto.

Oleszczuk, T. A.; 1988; *Political Justice in the USSR: Dissent and Repression in Lithuania, 1969-1987;* East European Monographs, Boulder.

Oll, L., 1993; 'Baltic Co-operation Changes Gear as Tallinn Pulls Out of BCC' *The Baltic Independent*, 4(164); 3.

Oll, L., 1994; 'Oil Terminal Blitzed', *The Baltic Independent*, 5(210), May; 2.

OECD, 1995; *The St. Petersberg Guidelines on Environmental Funds in the Transition to a Market Economy;* OECD, Paris.

Pakulski, J., 1991; *Social Movements: The Politics of Moral Protest;* Longman Chesire, Melbourne.

Parkin, S. (ed.), 1991; *Green Light on Europe;* Heretic Books, London.Parry, G., 1978; *John Locke;* George Allen & Unwin, London

Paskauskas, R., and Sadauskas, K. (eds), 1993; *Ignalina Nuclear Power Plant and the Environment;* Ignalina NPP and Environment Board, Institute of Botany, Vilnius.

Patnaik, P., 1991; *Economics and Egalitarianism*; Oxford University Press, New Dehli.

Pearce, D., Markandya, A., and Barbier, E. B., 1989; *Blueprint for a Green Economy*; Earthscan, London.

Pedersen, K. H., (ed.), 1995; *The Institutional and Legal Framework for Environmental Policy in the Agricultural Sector: Estonia, Latvia, and Lithuania*; South Jutland University Press, Esbjerg.

Pedersen, K. H., 1995; 'A Comparison Between the Three Baltic States: Perspectives for Sustainable Agriculture as the Outcome of Institutional and Policy Intrument Choice' in Pedersen, K. H., (ed.); *The Institutional and Legal Framework for Environmental Policy in the Agricultural Sector: Estonia, Latvia, and Lithuania*, 101-115; South Jutland University Press, Esbjerg.

Penn, W. J., 1995; 'Environmental Financing Strategies for Lithuania'; Central and Eastern Europe Environmental Economics and Policy Project, Lithuania Working Paper #3; USAID and Harvard Institute for International Development, Vilnius.

Perera, J., 1993; 'Why Russia Still Wants Nuclear Power', *New Scientist*; May 8; 29-33.

Peterson, D. J., 1993; *Troubled lands: The Legacy of Soviet Environmental Destruction*; Westview Press, Boulder.

PHARE and FENVIRON, 1994; *Regional Environmental Programme for the Baltic Sea: Coordinationa and Programming* - Final Report; PHARE.

Pierson, C., 1993; 'Democracy, Markets and Capital: Are there Necessary Economic Limits to Democracy?' in Held, D., (ed.), *Prospects for Democracy: North, South, East, West*, 179-99; Polity Press, Cambridge.

Plamenatz, J., 1954 (1961); *German Marxism and Russian Communism*; Longmans; London.

Povilanskas, R., 1993; 'Oil Terminal May Threaten Baltic Environment', *The Baltic Independent*, March; 7.

Prater, B., Nakad, G., Prasher, B., and Lenkaitis, R., 1994; *USAID Mission to Lithuania: Technical Assistance on Environmental Issues*; USAID, Vilnius.

PROMENT LTD., 1994; *Analysis of Production Costs for the Ignalina Nuclear Power Plant*, Final Report to SKI Eastern European Co-operation Project, Stockholm.

Pryde, P. R., 1991; *Environmental Management in the Soviet Union*; Cambridge University Press, Cambridge.

Pryde, P. R., (ed.), 1995; *Environmental Resources and Constraints in the Former Soviet Republics*; Westview Press, Boulder.

Ramberg, B., 1996; *Ten Years After the Chernobyl Nuclear Disaster: Continued Risks, Failed International Efforts, and the Need for a New Approach;* Committee to Bridge the Gap, California.

Redclift, M., 1989; 'Turning Nightmares into Dreams: The Green Movement in Eastern Europe', *The Ecologist,* 19(5):177-183

Regional Environment Center for Central and Eastern Europe (ed.), 1995; *Status of Public Participation Practices in Environmental Decisionmaking in Central and Eastern Europe;* REC, Budapest.

Reisinger, W. M., Miller, A. H., Hesli, V. L., and Hill Maher, K., 1994; 'Poltical Values in Russia, Ukraine and Lithuania: Sources and Implications for Democracy', *British Journal of Political Science,* 24; 183-223.

Reisinger, W. M., Miller, A. H., and Hesli, V. L., 1995; 'Public Behaviour and Political Change in Post-Soviet States', *The Journal of Politics,* 57(4); 941-970.

Rich, V., 1992; 'Baltic States Struggle for Total Power', *New Scientist,* April 25; 12-3.

Rigby, T. H., 1992; 'The USSR: End of a Long, Dark Night?' in Miller, R. F. (ed.), *The Development of Civil Society in Communist Systems,* 11-23; Allen and Unwin, Sydney.

Rosendahl, P., 1993; 'Danes Afraid of Nuclear Threats', *The Baltic Independent;* 4(158); 7.

Rowell, S. C., 1994 (1995); *Lithuania Ascending: A Pagan Empire Within East-Central Europe 1295-1345;* Cambridge University Press, Cambridge.

Rubavicius, V., 1994; 'In the Prison of Post-Communist Freedom' in Samalavicius, A., (ed.), *Lithuanian Shift: Essays in Culture, Politics and Society,* 45-53; Vaidoto Oskinio Leidykla, Vilnius.

Runblom, H., Tydén, M., and Carlbäck-isotalo, H., 1992; 'The Baltic Region in History' in *The Baltic Sea Environment,* session 4; The Baltic University Secretariat, Uppsala.

Ruperez, J., 1994; *Democratization in Eastern Europe: An Interim Assessment (Draft General Report);* NAA International Secretariat, Brussels.

Rust VA Projekt AB, Soil and Water Ltd., and Baltic Consulting Group, 1994; *Klaipeda Environment Project: Feasibility Study (Final Report Volume 1);* Swedish EPA, Stockholm.

Sabaliunas, L., 1990; *Lithuanian Social Democracy 1893-1914;* Duke University Press, Durham.

Salay, J., Fenham, J., Jaanimägi, K., and Kristoferson, L., 1993; 'Energy and Environment in the Baltic States', *Annual Review of Energy Environment,* 18; 169-216.

Samalavicius, A., 1994; 'Cultural Images of Self' in Samalavicius, A., (ed.), *Lithuanian Shift: Essays on Culture, Politics, and Society*, 67-77; Vaidoto Oskinio Leidykla, Vilnius.

Samonis, V., 1996; 'Lithuania's Economic Transformation: From Moscow to Vilnius and from Plan to Market', *Osteuropa-Wirtschaft*, 41(2); 141-158.

Savasis, J., 1966; *The War Against God in Lithuania;* Manyland Books, New York.

Schmidt, A., 1971(1973); *The Concept of Nature in Marx*; NLB, London.

Scott, M. J., Dagle, J. E., Gaustad, K. L., Placet, M., Roop, J. M., Schienbein, L. A., and Ulibarri, C. A., 1995; 'Dark After Chernobyl: Closing Former Soviet Power Reators', *Energy Policy*, 23(8); 703-717.

Semeniene, D., Bluffstone, R., and Cekanavicius, L., 1996; *The Lithuanian Pollution Charge System: Evaluation and Prospects for the Future;* Central and Eastern Europe Environmental Economics and Policy Project, Lithuania Working Paper #8; USAID and Harvard Institute for International Development, Vilnius.

Senn, A. E., 1990; *Lithuania Awakening*; University of California Press, Berkley.

Seselgis, K., 1991; 'Garbingas Jubiliejus' (Respectable Anniversary), *Musu Gamta*, 4, 2-3.

Shtromas, A., 1994; 'The Baltic States as Soviet Republics: Tensions and Contradictions' in Smith, G. (ed.), *The Baltic States: The National Self-Determination of Estonia, Latvia and Lithuania*, 86-117; Macmillan, London.

Silbajoris, R., (ed.), 1983; *Mind Against the Wall: Essays on Lithuanian Culture Under the Soviets;* Institute of Lithuanian Studies Press, Chicago.

Simenas, J., 1993; 'Naftos Terminalas: Kalbu Daug, Vilkinimo Dar Daugiau' (Oil terminal: A Lot of Talk, (but) Delays are Even More Plentiful), *Lietuvos Rytas*; 12 May.

Sinnig, C., 1992; 'Lithuania's Fortress Faces a New Age', *The Baltic Independent*, 3(115); 7.

Sinnig, C., 1993; 'Brazauskas Makes Inauguration History', *The Baltic Independent*, 3(151); 8.

Smith, G., 1994; 'The Resurgence of Nationalism' in Smith, G. (ed.), *The Baltic States: The National Self-Determination of Estonia, Latvia and Lithuania*, 121-43; Macmillan, London.

Smith, G. (ed.), 1994; *The Baltic States: The National Self-Determination of Estonia, Latvia and Lithuania*; Macmillan, London.

Somers, M. R., 1993; 'Citizenship and the Place of the Public Sphere: Law, Community, and Political Culture in the Transition to Democracy', *American Sociological Review*, vol. 58; 587-620.

Spann, R. N., 1979; *Government Administration in Australia;* Allen and Unwin, Sydney.

Spudulis, V., and Vasilyev, A., 1993; 'The Kruonis Pumped-Storage Plant in Lithuania', *Water Power and Dam Construction*, July; 33.

Sruogiene-Sruoga, V., 1987; 'Jogaila (1350-1434)', *Lituanus*; 33(4); 23-34.

Staprans, A., 1992; 'Energy Crisis Continues in Lithuania', *The Baltic Observer*, no. 35, October 1992; 7.

Stec, S., 1995; *Manual on Public Participation in Environmental Decisionmaking: Current Practice and Future Possibilities in Central and Eastern Europe - Supplement (Estonia, Latvia, Lithuania)*; The Regional Environment Center for Central and Eastern Europe, Budapest.

Story, J., 1990; 'Europe's Future: Western Union or Common Home?' in Crouch, C. and Marquand, D. (eds.), *The Politics of 1992: Beyond the Single European Market*, 37-67; Basil Blackwell, Oxford.

Sukyte, J., Zelionkaite, V., Rinkeviciene, E., and Razumovskij, V., 1994; 'Mechanism of Oxidation of H^2S in the Baltic Sea' [sic] in Thurston, R. V. (ed.), 1994; *Environmental Studies in the Nemunas River Basin, Lithuania*, 137-146; Office for Research and Development, US Environmental Protection Agency; Athens, Georgia.

Supreme Council of Lithuania, 1991a; 'Law on Taxes on State Natural Resources' in Environmental Protection Department and Lithuanian Information Institute (eds), 1992; *Information Bulletin No.i*, 20-4;Vilnius.

Supreme Council of Lithuania, 1991b; 'Law on Taxes on Environmental Pollution' in Environmental Protection Department and Lithuanian Information Institute (eds), 1992; *Information Bulletin No.i*, 24-38; Vilnius.

Supreme Council of Lithuania, 1991c; 'The Procedure for Establishment of Standards for Emission of Pollutants into the Environment and for Issuance of Permits for Usage of Natural Resources' in Environmental Protection Department and Lithuanian Information Institute (eds), 1992; *Information Bulletin No.i*, 39-51; Vilnius.

Supreme Council of Lithuania, 1992a; 'Resolution on the Draft Constitution of the Republic of Lithuania', No.I-2965; Vilnius.

Supreme Council of Lithuania, 1992b; 'Law on Environmental Protection of the Republic of Lithuania', *Parliamentary Record No.3*, 5-17; Vilnius.

Supreme Council of Lithuania, 1995; 'Energy Law of the Republic of Lithuania', No. 1-826, March 28; Vilnius.

Suziedelis, S., 1965; 'Lithuania from Medieval to Modern Times: A Historical Outline' in Vardys, V. S. (ed.), *Lithuania Under the Soviets: Portrait of a Nation, 1940-1965*, 3-19; Frederick A. Praeger, New York.

Swedish Environmental Protection Agency, 1995; 'Poland Receives Most Environmental Aid But Russia Will Get More Support'; infoterra press release; April.

Tammerk, T., 1993a; 'Estonian Ship Spills Oil Near Tallinn', *The Baltic Independent*; 3(145), January; 1.

Tammerk, T., 1993b; 'G-24 Energy Meeting Recommends Local Fuels' in *The Baltic Independent*; 3(152), March; 6.

Taskunas, A. P., (ed.), 1992; *Lithuania in 1991*; TUU Lithuanian Studies Society, Hobart.

Thomas, I., 1987; *Environmental Impact Assessment: Perspectives and Practice*; Aristoc Press, Monash University, Melbourne.

Thurston, R. V. (ed.), 1994; *Environmental Studies in the Nemunas River Basin, Lithuania*; Office for Research and Development, US Environmental Protection Agency; Athens, Georgia.

Tiberg, N., 1992; 'The Prospect of a Sustainable Society' in *The Baltic Sea Environment*, session 10; The Baltic University Secretariat, Uppsala.

Trapans, J. A., (ed.), 1991; *Towards Independence: The Baltic Popular Movements*; Westview Press; Boulder.

Trummel, A., 1994; 'Consuming the Baltic Oil' *The Baltic Independent*; 5(213), May; 8.

UNICEF, 1995; *Central and Eastern Europe in Transition: Public Policy and Social Conditions*; Regional Monitoring Report no. 3; UNICEF International Child Development Centre, Florence.

United States Senate Hearing, 1993; 'Safety of Soviet Designed Nuclear Powerplants'; hearing before the Committee on Energy and Natural Resources in the US Senate, Washington DC.

United States Environmental Protection Agency (US EPA), 1995; *Baltic Republics Environmental Monitoring Review Project: Findings and Recommendations - Lithuania*; US Government Printing Office, Washington.

Uzkalnis, A., 1993; 'Brazuaskas wants Lithuania to go to Europe', *The Baltic Independent*; 4(163), May-June; 4.

Uzkalnis, A., 1994a; 'Oil terminal Dispute Nears Resolution', *The Baltic Independent*, 4(193), January; B2.

Uzkalnis, V., 1994b; 'US Company Wins Oil Terminal Bid', *The Baltic Independent*, 5(210), April-May; B1.

Uzkalnis, A., & Ozols, M., 1993; 'Lithuania Prospecting to End Reliance on Russian Oil', *The Baltic Independent*; 4(179), September; B1.

Vainius, L., and Piksrys, S., 1994; *Report About Lithuanian Energetic Siutation;* Energy and Air Pollution Information Centre, Kaunas.

Vainius, L., 1995; 'Country Report: Lithuania' in Regional Environment Center for Central and Eastern Europe (ed.), 1995; *Status of Public Participation Practices in Environmental Decisionmaking in Central and Eastern Europe,* 89-96; REC, Budapest.

Vainius, L., 1996; 'Visuomeniniu Organizaciju Vaiduo Aplinkosaugoje' (The Role of Public Organisations in Environmental Protection), *Geologijos Akiraciai,* 3(23); 38-4.

Vaitkevicius, E., 1994; 'Ecological Development in the Forest Sector and the Role of National Parks'; paper presented at *Ecological Regional Development in Lithuania* International Seminar, October 20-24, Birstonas, Lithuania.

Vari, A. and Tamas, P., (eds); *Environment and Economic Transition: Policy and Politics in Central and Eastern Europe;* Kluwer Academic Publishers, Dordrecht.

Vardys, V. S., 1965 (ed.); *Lithuania Under the Soviets: Portrait of a Nation;* Frederick A. Praeger, New York.

Vardys, V. S., 1991; 'Sajudis: National Revolution in Lithuania' in Trapans, J. A., (ed.); *Towards Independence: The Baltic Popular Movements,* 11-23; Westview Press, Boulder.

Varneckiene, J., 1997; 'Pollution Permits and Charges in Lithuania' in Lewan, L. (ed.), *Production, Economy, and Environment: Theories and Applications,* 64-70; Proceedings from an International Workshop, June 1996, Vilnius; Environmental Studies Centre, University of Vilnius (forthcoming).

Viesulas, R. T., 1993; 'Party Formation in Lithuania: Prospects for Multiparty Democracy', *Lituanas,* 39(2); 5-35.

Vilemas, J., and Reichenbach, D., 1995; 'Nuclear Power in Lithuania: Problems and Prospects', *Energiepolitik,* 40(8/9); 528-532.

Vilemas, J., 1995; 'Nuclear Energy in Lithuania: Present Status and Hopes for the Future', *Energy Policy,* 23(8); 719-722.

Vilkelyte, D., 1993; 'Lithuania Set to Back Down on Oil Terminal Construction', *The Baltic Independent;* 4(159), April-May; 1.

Vilkelyte, D., 1994; 'US Company Wins Oil Terminal Bid', *The Baltic Independent,* 5(210);B1.

Wallace, H., 1981; 'National Politics And Supranational Integration' in Cameron, C., (ed.) *Regionalism and Supranationalism,* 111-26; The

Institute for Research on Public Policy and Policy Studies Institute, Quebec & London.

Westing, A. H. (ed.), 1989; *Comprehensive Security for the Baltic: An Environmental Approach*; SAGE Publications, London.

Westing, A. H., 1989a; 'Environmental Approaches to Regional Security' in Westing, A. H. (ed.), *Comprehensive Security for the Baltic: An Environmental Approach*, 1-14; SAGE Publications, London.

Westing, A. H., 1989b; 'Regional Security in a Wider Context' in Westing, A. H. (ed.), *Comprehensive Security for the Baltic: An Environmental Approach*, 113-21; SAGE Publications, London.

White, J. D., 1994; 'Nationalism and Socialism in Historical Perspective' in Smith, G. (ed.), *The Baltic States:The National Self-Determination of Estonia, Latvia, and Lithuania*, 13-40; Macmillan, London.

White, L., Jr., 1971; 'The Historical Roots of Our Ecological Crisis' in Barr, J. (ed.), *The Environmental Handbook*, 3-16; FOE, London.

Wilson, J., 1973; *Introduction to Social Movements*; Basic Books, New York.

Wolfgast, S., 1993; 'Council of Europe Opens Doors to Balts', *The Baltic Independent*; 4(161), May; 1.

Worley, N. and Lewins, J. (eds), 1988; *The Chernobyl Accident and Its Implications for the United Kingdom*; Elsevier Applied Science, London.

World Bank (The), 1993; *Lithuania: the Transition to a Market Economy*; The World Bank, Washington DC.

World Bank (The) and International Energy Agency, 1993; *Lithuania: Power Demand and Supply Options*, Report to the G-7; The World Bank, Washington.

World Bank (The), 1994; *Staff Appraisal Report - Republic of Lithuania:Klaipeda Environment Project*; The World Bank, Washington DC.

World Wide Fund for Nature UK, 1994; *The Ecological Impact of the PHARE Programme: A Non-Governmental Organisation Perspective (Final Report to the European Parliament)*; European Parliament, Brussels.

Wright, M., and Shorey, H., 1994; 'A Quiet Debut: The European Environment Agency', *Tomorrow*, iv(3); 77.

Zablockis, Henrikas, 1992; 'Terminaliu - Taip!' (Terminal - Yes!), *Vakaru Ekspresas*, reprinted in *Respublika*, September 1; 3.

Zajankauskaite, J., 1995; 'Use of Natural Resources: An Overview of the Process of Issuing and Implementing the Pollution and Natural Resource Permit System in Lithuania'; Central and Eastern Europe Environmental Economics and Policy Project, Lithuania Working Paper #2; USAID and Harvard Institute for International Development, Vilnius.

Zemulis, F., 1992a; 'Iki Ausros' (Until the Sun Rises), *Musu Gamta*, vol. 3; 2.

Zemulis, F., 1992b; 'Griciukas Paprastasis' (Dear, Simple Gricius), *Musu Gamta*, vol. 6; 2-3 and 11.

Zilgalvis, P., Kundrotas, A., and Balandis, D., 1993; *Environmental Legislation in Lithuania*; Environmental Protection Ministry of Lithuania, Vilnius.

Zmudzinski, L., 1989; 'Environmental Quality in the Baltic Region' in Westing, A. H. (ed.), *Comprehensive Security for the Baltic: An Environmental Approach*, 46-53; SAGE Publications, London.

Zylicz, T., 1993; 'Summary of Session 2: Financing the Action Programme' in Helsinki Commission (ed.), *Baltic Sea Environment Proceedings No. 47*, 185-7; HELCOM, Helsinki.

Newspapers and Electronic News Services

EESTI RINGVAADE (internet edition) 4 (29.1); July 18-20, 1994.

ELTA, October 1, 1995.

ELTA October 21, 1995.

ELTA; September 25, 1996.

ELTA; October 24, 1996.

ELTA; December 4, 1996.

ELTA; January 19, 1997.

Europos Lietuvis 8(2243); 'Vieta Naftos Terminalui Jau Parinkta' (The Site for the Terminal Has Been Chosen), March 4 1993.

Musu Gamta, 1991, volume 6; 6.

OMRI Daily Digest, no. 138; July 18 1995.

OMRI Daily Digest, no. 226; November 20 1995.

OMRI Daily Digest, nos. 5: January 8 1996.

OMRI Daily Digest, nos. 18: January 25 1996.

OMRI Daily Digest, nos. 19: January 26 1996.

OMRI Daily Digest, nos. 20: January 27 1996.

OMRI Daily Digest, no. 180; September 17 1996.

OMRI Daily Digest, no. 206; October 23 1996.

OMRI Daily Digest, no. 234; December 5 1996.

OMRI Daily Digest, no. 249, December 12 1996.

OMRI Daily Digest, no.54; March 18 1997.

The Baltic Independent 3(127), 11; 'Reactor Shut Down', September 1992.

The Baltic Independent 3(133), 3; 'Swedish Aid for Ignalina', October 1992.

The Baltic Independent 3(138), 5; 'US$50 million Loan to Lithuania', November, 1992.

The Baltic Independent 3(141), 1; 'Down and Out', December 1992.

The Baltic Independent 4(158), 7; 'Danes Afraid of Nuclear Threats', 1993.

The Baltic Independent 4(159), B1; 'Kuwaiti Oil Agreements May be in the Pipeline', May, 1993.

The Baltic Independent 4(162), 1; May 21-27 1993.

The Baltic Independent 4(171), B3; 'Butinge Oil Terminal Project to Start This Year', July 1993.

The Baltic Independent 4(185), B1; 'Energy Co-operation Begins to Heat Up', November 1993.

The Baltic Independent 4(190), 5; 'Danish Brand Nuclear Plant an Environmental Hazard', December 1993.

The Baltic Independent 4(199), 2; 'New Sects Pose Threat To The Traditional', February 1994.

The Baltic Independent 5(208), B3; 'Back to Basics', April 1994.

The Baltic Independent 5(214), 2; 'Summit Pledges European Ties', May 1994.

The Baltic Independent 5(243), B1; 'Lithuania Considering Saudi Arabian Oil', December 1994.

The Baltic Observer, 3; 'Lithuania's Ignalina Springs a Leak', October 1992.

The Baltic Times, no. 37, 2; November-December 1996.

The Economist of Lithuania, vol. 3, 55; 1990.

Respublika, 'Ekonomikos Informacija: Ketvirtadalis Lietuvos Naftos' (Economic Information: A Quarter of Lithuania's Crude Oil), September 25, 3; 1992

Weekly News from Lithuania, 'Terminal Only For Import', June 1-7, 1993 translated from *Respublika*, June 3, 1993.

Vyriausybes Zinios, no. 111, 3; 1996.

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Internet Sites

http://neris.mii.lt/ (Lithuanian Home Page)

http://rc.lrs.lt/rinkimai/ (Lithuanian Electoral Commission)

http://vingis.sc-uni.ktu.lt/ (Department of Administration, Kaunas Technical University, Lithuania)

Appendix 1a

Questionnaire / Anketa

Name of Organisation
Organizacijos pavadinimas: _____

1) AGE	• under 18	☐	AMZIUS	• iki 18 ☐
	• 18-25	☐		• 18-25 ☐
	• 26-35	☐		• 26-35 ☐
	• 36-50	☐		• 36-50 ☐
	• 50+	☐		• 50+ ☐
2) SEX	• F/M		LYTIS	• Vyr/Mot

3) Nationality
Tautybe _____

4) Where in Lithuania have you lived most?
Kurioje Lietuvos vietoveje gyvenote ilgiausiai? _____

5) EDUCATION:	☐	ISSILAVINIMAS:	☐
• Secondary (12 Yrs)	☐	• Vidurinis	☐
• Tertiary (B.A. + M.A. 5Yrs)	☐	• Aukstasis	☐
• Doctorate (PhD)	☐	• Aspirantura	☐
6) OCCUPATION:		UZIMTUMAS:	
• Service Sector	☐	• Aptarnavimo sfera	☐
• Industry:	☐	• Pramone:	☐
a) Supervisory	☐	a) Vadovavimo sfera	☐
b) Technical	☐	b) Inzinierius	☐
c) Manual	☐	c) Darbininkas	☐

Please specify the type of industry _____
Prasome ivardinti konkrecia sfera _____

• Private Business	☐	• Privatus verslas	☐
• Professional /Specialist	☐	• Specialistas su	☐
Please specify Profession		Prasome ivardinti konkrecia sriti	
_____		_____	
• Student	☐	• Studentas/e	☐
• Other, please specify		• Kila sfera: prasome ivardinti	
_____		_____	

7) Have you taken part in an environmental protest rally? y/n
Ar esate dalyvaves (-usi) ekologineje protesto demonstacijoje? taip/ne

8) Did you take part in any independence rallies? y/n
Ar esate dalyvaves (-usi) Lietuvos Nepriklausomybes demonstracijose? taip/ne

9) Are you a registered member of this Green group? y/n
Ar esate uregustryitas suis zakuyhus gryoes barts? taip/ne

10) To what extent do you take part in the group's activities?
Kokiu mastu dalyvaujate sios grupes veikloje?

• very active	☐	• labai aktyviai	☐
• active	☐	• aktyviai	☐
• occasional participation	☐	• retkarciais	☐
• non-participatory	☐	• nedalyvauju	☐

11) How would you rate the state of the environment in Lithuania?
Kaip vertinate ekologine padeti Lietuvoje?

• excellent	☐	• labai gerai	☐
• good	☐	• gerai	☐
• fair	☐	• patenkinamai	☐
• polluted	☐	• blogai	☐
• devastated	☐	• labai blogai	☐

12) What are the major environmental problems (if any) in Lithuania: List 3.
Kokios yra (jeigu yra) pagrindines ekologines prolemos Lietuvoje:
Isvardinkite 3.

1) _____
2) _____
3) _____

13) Why do you think these problems exist?
Kodel Jus manote, jog sios problemos egzistuoja

_____
_____

14) What do you see as the major problems for the Global environment? List 3
Kokios, Jusu nuomone, yra pagrindines pasaulio ekolgines problemos?
Isvardinkite 3

1) _____
2) _____
3) _____

15) Do you have contact with any Green groups from other countries? y/n
Which countries?
Ar palaikote rysius su uzsienio saliu zaliuju grupemis? taip/ne
Su kuriomis salimis? _____

16) Would you vote for a Lithuanian Greens Candidate? y/n/u
Ar balsuotumete uz Lietuvos zaliuju kandidata? taip/ne/nezinau

17) Do you expect the environmental situation to change now that Lithuania is an independent country? y/n/u Explain.
Ar manote, kad ekologine padetis pasikeis, Lietuvai tapus Nepriklausoma valstybe? taip/ne/nezinau. Pateikite savo argumentus.

_____
_____

Appendix 1b

Questionnaire / Anketa

1) AGE

- under 18 ☐
- 18-25 ☐
- 26-35 ☐
- 36-50 ☐
- 50+ ☐

AMZIUS

- iki 18 ☐
- 18-25 ☐
- 26-35 ☐
- 36-50 ☐
- 50+ ☐

2) SEX • F/M LYTIS • Vyr/Mot

3) Nationality
Tautybe _____

4) Where in Lithuania have you lived most?
Kurioje Lietuvos vietoveje gyvenote ilgiausiai? _____

5) EDUCATION: ☐ ISSILAVINIMAS: ☐

- Secondary (12 Yrs) ☐ • Vidurinis ☐
- Tertiary (BA + MA 5Yrs) ☐ • Aukstasis ☐
- Doctorate (PhD) ☐ • Aspirantura ☐

6a)Where did you come from to study in Vilnius/Kaunas?
Is kur esate atvykes/-usi mokytis i Vilniu/Kauna?

_____

6b)Faculty:
Fakultetas: _____

7) How would you rate the state of the environment in Lithuania?
Kaip vertinate ekologine padeti Lietuvoje?

- excellent ☐ • labai gerai ☐
- good ☐ • gerai ☐
- fair ☐ • patenkinamai ☐
- polluted ☐ • blogai ☐
- devastated ☐ • labai blogai ☐

8) What are the major environmental problems (if any) in Lithuania: List 3.
Kokios yra (jeigu yra) pagrindines ekologines problemos Lietuvoje:
Isvardinkite 3.

1) _____

2) _____

3) _____

9) Why do you think these problems exist?
Kodel Jus manote, jog sios problemos egzistuoja?

---

10) What do you see as the major problems for the Global environment? List 3.
Kokios, Jusu nuomone, yra pagrindines pasaulio ekolgines problemos?
Isvardinkite 3.

1) ---

2) ---

3) ---

11) Are you a registered member of a Green group? y/n
Ar esate iregistruotas zaliuju gupes narys? taip/ne

12) To what extent do you take part in the group's activities?
Kokiu mastu dalyvaujate sios grupes veikloje?

- very active ☐
- active ☐
- occasional participation ☐
- non-participatory ☐

- labai aktyviai ☐
- aktyviai ☐
- retkarciais ☐
- nedalyvauju ☐

13) Have you taken part in an environmental protest rally? y/n
Ar esate dalyvaves (-usi) ekologineje protesto demonstacijoje? taip/ne

14) Did you take part in any independence rallies? y/n
Ar esate dalyvaves (-usi) Lietuvos Nepriklausomybes demonstracijose?
taip/ne

15) Would you vote for a Lithuanian Greens Candidate? y/n/u
Ar balsuotumete uz Lietuvos zaliuju kandidata? taip/ne/nezinau

16) Do you expect the environmental situation to change now that Lithuania is an independent country? y/n/u Explain
Ar manote, kad ekologine padetis pasikeis, Lietuvai tapus Nepriklausoma valstybe? taip/ne/nezinau Pateikite savo argumentus.

Appendix 2a: Work Published by the Author

Banks, A. J., and Sainsbury, M. T., 1997; 'Human Rights, the Environment, and Nuclear Reactors: Towards a Right to a Healthy Environment, *Journal of International Relations*; (forthcoming).

Banks, A. J., 1997; 'International Assistance for Environmental Purposes in Lithuania 1991-1994' in Lewan, L., (ed.), *Production, Economy, and the Environment:Theories and Applications*, 125-135; Proceedings of an International Workshop, June 16-19, 1996; Environmental Studies Centre, University of Vilnius, Lithuania (forthcoming).

Banks, A. J., 1997; 'Incorporating Environmental Values into Lithuanian Economic Policy: A Poster' in Lewan, L., (ed.), *Production, Economy, and Environment*, 136-139; Proceedings from an International Workshop; Environmental Studies Center, University of Vilnius (forthcoming).

Banks, A. J., 1997; 'Cycling to Reduce Air Pollution: The Environmental Protection Cycle Tour', *Jauzinios*; 45; 6-7, Melbourne.

Banks, A. J., 1996; 'Aplinkos Problemos ir Lietuvos Visuomene: Zvilgsnis is Salies' (Environmental Problems and Lithuanian Society: A View from Outside), *Geologijos Akiraciai*, 3(23); 101-105, Vilnius.

Banks, A. J., 1996; 'International Assistance for Environmental Rehabilitation in Lithuania' in Fennell, T.G., and Johansons, H. A., (eds), *Baltic Studies in Australia II*, 441-461; AABS Australasia, Melbourne, Australia.

Banks, A. J., 1996; 'Environmental Protection in the Baltic Sea Area: Implications for Independent Lithuania' in Fennell, T.G., and Johansons, H. A., (eds), *Baltic Studies in Australia II*, 310-330; AABS Australasia, Melbourne, Australia.

Banks, A. J., 1996; 'Perceptions of Nature in Lithuania: Pre 1387-1991' in Fennell, T.G., and Johansons, H. A., (eds), *Baltic Studies in Australia II*, 108-121; AABS Australasia, Melbourne, Australia.

Banks, A. J., 1996; 'Gamtai Saugoti Reikia Ne Tik Pinigu bet ir Ismanymo' (Environmental Protection Needs Commitment, not only Money); *Lietuvos Rytas*, 260, November 6; 45.

Banks, A. J., 1996; 'Poverty, Children, Policy - Book Review', *Lithuanian Papers*, vol 10; 78.

Banks, A. J., and Todd, J. J., 1995; 'Ignalina Nuclear Power Station: Problems and Prospects', *Lithuanian Papers*, vol. 9; 30-44.

Banks, A. J. and Todd, J. J., 1995; 'An Environmental Perspective on Lithuania's Energy Options'; prepared for the IGU Regional Conference *Environment and Quality of Life in Central Europe: Problems of Transition*, August 22-26, 1994, Prague, Czech Republic (proceedings on CD-ROM).

Banks, A. J., 1994; 'Environmental Co-operation in the Baltic Sea Region: A Lithuanian Perspective', *GeoJournal*; 33(1); 37-43.

Banks, A. J., 1994; 'Baltijos Jura - Visu Bendras Reikalas' (The Baltic Sea - A Common Concern), *Musu Gamta*; Vol. 1; 5, Vilnius.

Banks, A. J., 1993; 'Ekologija ir Economika Lietuvoje' (Ecology and Economics in Lithuania), *Musu Gamta*; Vol. 2; 3, Vilnius.

Banks, A. J., 1993; 'Oil Terminal: Co-operation or Going it Alone?', *Lithuanian Papers* Vol. 7; 16- 27.

Banks, A. J., 1991; *Lithuania's Environmental Problems: Cultural and Political Aspects*; TUULSS; Hobart.

Appendix 2b: Conferences Attended by the Author

Production, Economy, and the Environment: Theories and Applications International Workshop, June 16-19, Vilnius, Lithuania (poster: 'Incorporating Environmental Values into Lithuanian Economic Policy: The Path to Sustainable Society' and paper presented: 'International Assistance for Environmental Purposes in Lithuania 1991-1994').

Association for Advancement of Baltic Studies (Australasian Section) 8th Conference, September 23-5, 1995, Adelaide, Australia (paper presented: 'International Assistance for Environmental Rehabilitation in Lithuania').

Ecological Regional Development in Lithuania, International Seminar organised by BIOTA, Lithuanian Fund for Nature, and Euronature and funded by the Federal Environmental Agency of Germany, October 20-24, 1994, Birstonas, Lithuania (observer).

The European Union and its Eastern Neighbours - Hellenic Foundation for European and Foreign Policy International Seminar; September 10-17, 1994, Halki, Greece (paper presented: 'Environmental Policy: The EU and Lithuania').

Environment and Quality of Life in Central Europe: Problems of Transition - International Geographic Union Regional Conference; August 22-26, Prague, Czech Republic (paper presented: 'An Environmental Perspective on Lithuania's Energy Options').

Association for Advancement of Baltic Studies (Australasian Section) 7th Conference, September 1993, Melbourne (paper presented: 'Environmental Protection in the Baltic Sea Area: Implications for Independent Lithuania').

Association for Advancement of Baltic Studies (Australasian Section) 6th Conference, September 1991, Melbourne, Australia (paper presented: 'Perceptions of Nature in Lithuania: Pre 1387-1991').